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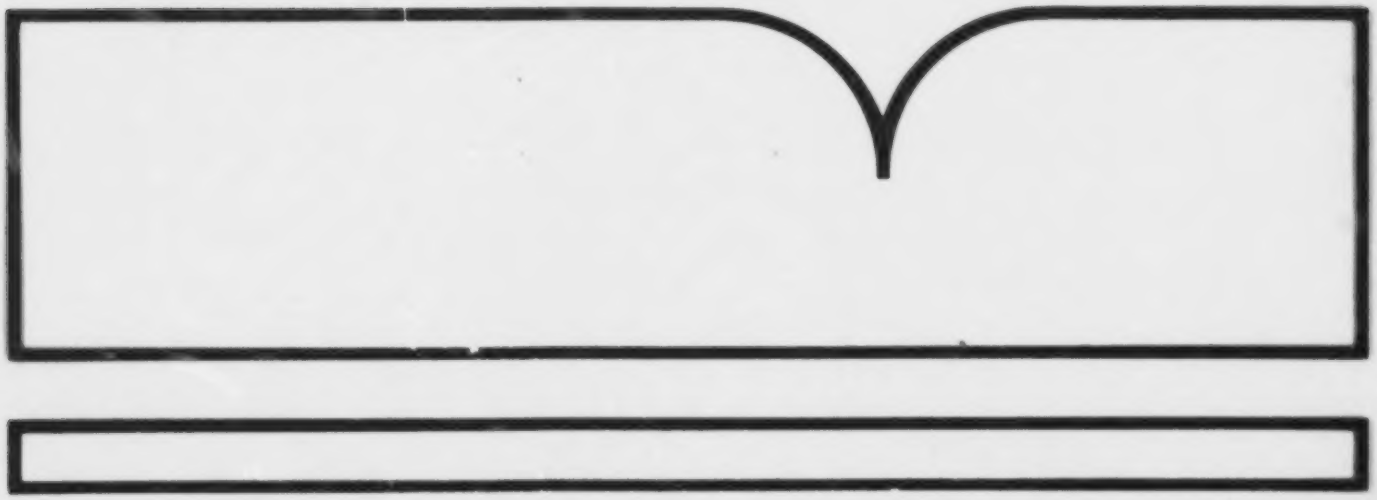
Full-Scale Field Evaluation of Waste Disposal from Coal-Fired Electric Generating Plants. Volume 5. Appendix F

Little (Arthur D.), Inc., Cambridge, MA

Prepared for

Environmental Protection Agency
Research Triangle Park, NC

Jun 85



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FULL-SCALE FIELD EVALUATION OF WASTE DISPOSAL FROM COAL-FIRED ELECTRIC GENERATING PLANTS

Volume V. Appendix F

by

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16. ABSTRACT The six-volume report summarizes results of a 3-year study of current coal ash and flue gas desulfurization (FGD) waste disposal practices at coal-fired electric generating plants. The study involved characterization of wastes, environmental data gathering, evaluation of environmental effects, and engineering/cost evaluations of disposal practices at six sites around the country. Study results provide technical background data and information for EPA, state and local permitting officials, and the utility industry for implementing environmentally sound disposal practices. Study data suggest that no environmental effects have occurred at any of the six sites; i.e., data from wells downgradient of the disposal sites indicate that waste leachate has resulted in concentrations of chemicals less than the EPA primary drinking water standards. A generic environmental evaluation--based on a matrix of four waste types, three disposal methods, and five environmental settings--shows that, on balance, technology exists for environmentally sound disposal of coal ash and FGD wastes for ponding, interim ponding/landfilling, and landfilling. For some combinations of waste types, disposal methods, and environmental settings, mitigation methods must be taken to avoid adverse environmental effects. Costs of waste disposal operations are highly system and site specific.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Pollution Waste Disposal Wastes Coal Combustion Electric Power Plants Ashes Flue Gases Desulfurization Cost Engineering	Pollution Control Stationary Sources	13B 21B 14G 07A, 07D 21D 14A 10B

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NOTICE

This document has been reviewed in accordance with U.S. Environmental Protection Agency policy and approved for publication. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

APPENDIX F

Chemical Sampling and Analysis Data

This appendix provides the chemical sampling and analysis data reported in the format described in the main body of the report. This appendix contains the following sections:

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• site map		
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• boiler cleaning wastes data		
• solid samples data		
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Site (7): Dave Johnston	[PART 4]	196
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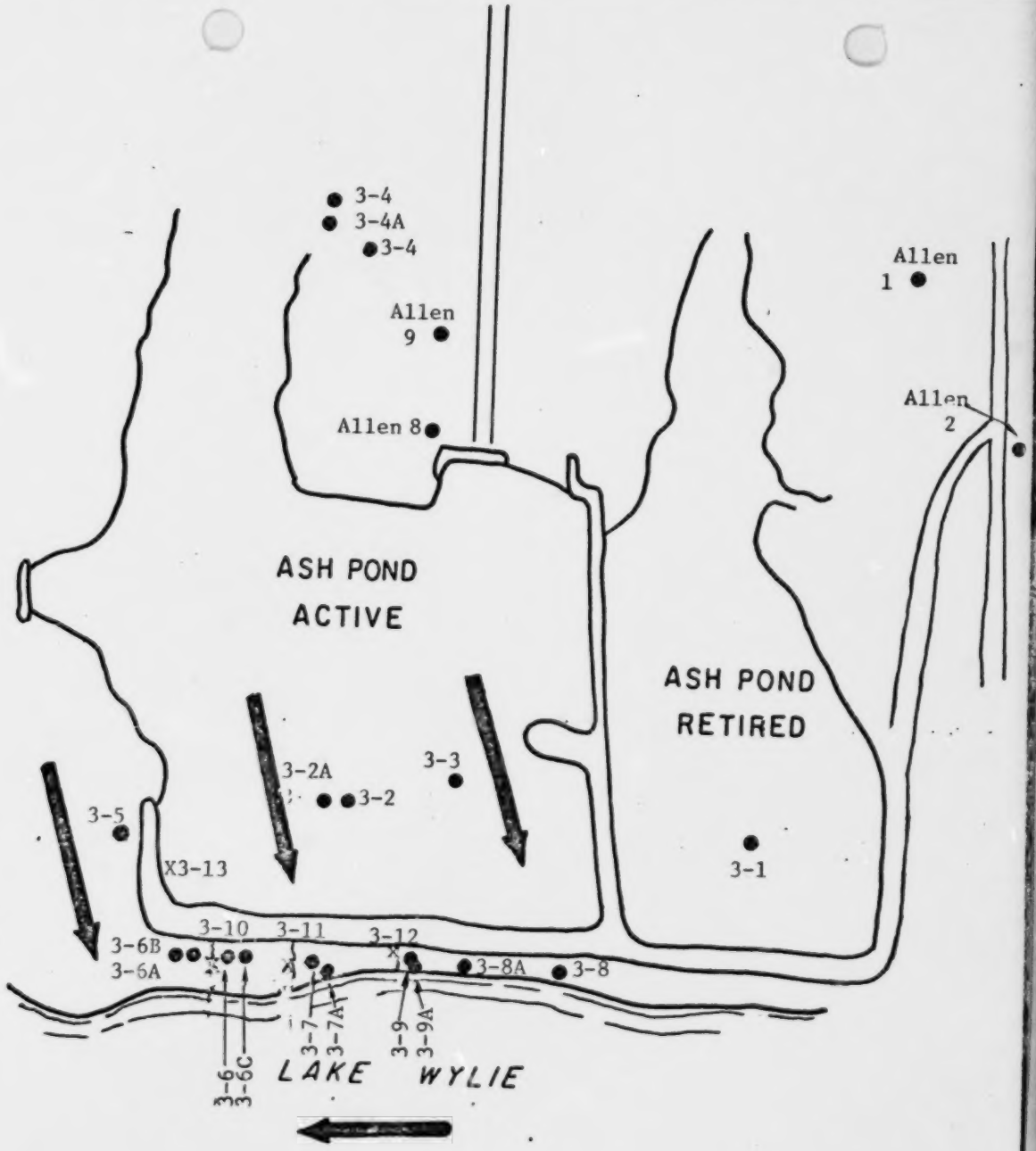
Allen

ALLEN SITE



X Surface Water Sample Locations

●Location of Geotechnical Borings and Monitoring Wells.

Arrows Point in Direction of Ground Water Movement.

PLANT THREE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)	65	120	193	1265
3-4A (FILL)		116	195	
3-4B (RES./ROCK)	71	95	196	1266
DP-1				1284
DP-2				1285
DP-8				1286
DP-9				1289
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		92	189	1261
ACTIVE ASH POND WELLS				
3-2 (ALL.)		93	190	1262
3-2 (ALL.) DIS. SOL.				1298
3-2A (ASH)		91	191	1263
3-3 (RES.)	64	94	192	1264
ASH POND LIQUORS				
3-2 (16-18 FT)	1			
3-2 (20-22 FT)	2			
3-2 (24-26 FT)	3			
3-2 (38-40 FT)	5			
3-2A (24.5-26.4 FT)	7			
3-3 (10-12 FT)	9			
3-3 (22-24 FT)	11			
3-3 (24-26 FT)	12			
DOWNGRADIENT WELLS (RES.)				
3-5	<102	90	197	1269
3-6	67	99	201	1270
3-6C	<106	102		
3-7A	<108	104	208	1277
3-8	69	106	209	1278
3-9	<111	115	211	1281
3-9A	80	117	213	1282
DOWNGRADIENT (ALL.)				
3-6A	<104	89	205	1271
DOWNGRADIENT (FILL)				
3-6B	<105	100	206	1274
3-8A	<110	110	210	1279
DOWNGRADIENT (DIKE)				
3-7	<107	103	207	1275
TOE DRAINS				
3-10		108	214	1290
3-11		119		1291
3-12		SP		1292
ASH POND DISCHARGE				
3-13		121		1293

(< values are negative)

PLANT THREE
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)	0.1	0.3	<0.2	0.4
3-4A (FILL)		0.2	<0.2	
3-4B (RES./ROCK)	0.1	0.2	<0.2	0.3
DP-1				0.4
DP-2				<0.1
DP-8				<0.1
DP-9				0.2
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		0.45	0.3	0.4
ACTIVE ASH POND WELLS				
3-2 (ALL.)		0.3	<0.2	0.3
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		0.85	0.7	0.5
3-3 (RES.)	0.3	0.4	<0.2	0.2
ASH POND LIQUORS				
3-2 (16-18 FT)	0.7			
3-2 (20-22 FT)	0.1			
3-2 (24-26 FT)	0.2			
3-2 (38-40 FT)				
3-2A (24.5-26.4 FT)	0.25			
3-3 (10-12 FT)	2.5			
3-3 (22-24 FT)	0.9			
3-3 (24-26 FT)	0.9			
DOWNGRADIENT WELLS (RES.)				
3-5		0.1	<0.2	<0.1
3-6	0.1	0.25	<0.2	0.3
3-6C		0.25		
3-7A		0.2	<0.2	0.3
3-8	0.1	0.1	<0.2	<0.1
3-9		<0.2	<0.2	0.3
3-9A	0.1	0.25	<0.2	0.3
DOWNGRADIENT (ALL.)				
3-6A		0.3	<0.2	0.3
DOWNGRADIENT (FILL)				
3-6B		0.1	<0.2	0.2
3-8A		0.2	<0.2	0.2
DOWNGRADIENT (DIKE)				
3-7		<0.2	<0.2	<0.1
TOE DRAINS				
3-10		0.25	<0.2	0.2
3-11		0.25		0.2
3-12				0.2
ASH POND DISCHARGE				
3-13		0.4		0.3

PLANT THREE
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)	7	17.2	5.5	10.6
3-4A (FILL)		14.5	18.1	
3-4B (RES./ROCK)	4	0.6	3.9	4.5
DP-1				2.4
DP-2				1.2
DP-8				1.3
DP-9				2.2
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		6.3	5.2	7.1
ACTIVE ASH POND WELLS				
3-2 (ALL.)		6.8	7.8	9.6
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		6.8	6.3	6.6
3-3 (RES.)	16	<0.5	1.5	3.9
ASH POND LIQUORS				
3-2 (16-18 FT)	10			
3-2 (20-22 FT)	10.5			
3-2 (24-26 FT)	8.3			
3-2 (38-40 FT)	11			
3-2A (24.5-26.4 FT)	10			
3-3 (10-12 FT)	8.3			
3-3 (22-24 FT)	7			
3-3 (24-26 FT)	6.5			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.5	0.9	1.1
3-6	6	0.7	5.3	6.1
3-6C		0.7		
3-7A		0.6	4.4	6
3-8	3	4.7	4.6	5.5
3-9		5.4	4.8	6.3
3-9A	4	0.6	4.5	5.9
DOWNGRADIENT (ALL.)				
3-6A		<0.5	2.2	3.3
DOWNGRADIENT (FILL)				
3-6B		<0.5	2.5	3.3
3-8A		11.5	9.9	9.9
DOWNGRADIENT (DIKE)				
3-7		<0.5	2.2	3.7
TOE DRAINS				
3-10		0.6	4.3	5.4
3-11		4.7		6
3-12		SP		7.9
ASH POND DISCHARGE				
3-13		0.6		6

PLANT THREE
CONCENTRATION OF 3 NITRATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)	0.5	0.8	<2	0.8
3-4A (FILL)		1.3	<2	
3-4B (RES./ROCK)	0.7	0.8	<2	
DP-1				1.1
DP-2				1.1
DP-8				1
DP-9				1.9
				1.2
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		0.6	<2	<0.6
ACTIVE ASH POND WELLS				
3-2 (ALL.)		0.8	<2	<0.6
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		1	3	<0.6
3-3 (RES.)	<0.5	0.8	<2	1
ASH POND LIQUORS				
3-2 (16-18 FT)	0.5			
3-2 (20-22 FT)	0.3			
3-2 (24-26 FT)	4			
3-2 (38-40 FT)	2			
3-2A (24.5-26.4 FT)	2.1			
3-3 (10-12 FT)	0.3			
3-3 (22-24 FT)	0.3			
3-3 (24-26 FT)	1.3			
DOWNGRADIENT WELLS (RES.)				
3-5		0.6	<2	0.8
3-6	0.7	0.8	<2	1.2
3-6C		1.5		
3-7A		0.8	<2	<0.6
3-8	1	<0.5	<2	<0.6
3-9		<0.5	<2	<0.6
3-9A	0.2	0.6	<2	<0.6
DOWNGRADIENT (ALL.)				
3-6A		1.3	<2	1
DOWNGRADIENT (FILL)				
3-6B		<0.5	<2	<0.6
3-8A		<0.5	<2	<0.6
DOWNGRADIENT (DIKE)				
3-7		4.5	4	2.2
TOE DRAINS				
3-10		<0.5	<2	<0.6
3-11		<0.5		<0.6
3-12		SP		<0.6
ASH POND DISCHARGE				
3-13		<0.5		<0.6

PLANT THREE
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)	2	10	<4	16.6
3-4A (FILL)		10	12	
3-4B (RES./ROCK)		<4	<4	2.1
DP-1				0.7
DP-2				1.4
DP-8				3.7
DP-9				0.5
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		100	92	89.9
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<4	<4	1.4
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		320	320	169.4
3-3 (RES.)	44	7	<4	24.3
ASH POND LIQUORS				
3-2 (16-18 FT)	62			
3-2 (20-22 FT)	190			
3-2 (24-26 FT)	197			
3-2 (38-40 FT)	240			
3-2A (24.5-26.4 FT)	205			
3-3 (10-12 FT)	82			
3-3 (22-24 FT)	12			
3-3 (24-26 FT)	108			
DOWNGRADIENT WELLS (RES.)				
3-5		<4	<4	1.7
3-6	5	<4	<4	5.4
3-6C		<4		
3-7A		13	22	28.5
3-8	48	72	67	76.2
3-9		<4	<4	4
3-9A	2	<4	<4	3
DOWNGRADIENT (ALL.)				
3-6A		<4	<4	1.4
DOWNGRADIENT (FILL)				
3-6B		<4	<4	7.7
3-8A		8	6	6.5
DOWNGRADIENT (DIKE)				
3-7		<4	<4	1.4
TOE DRAINS				
3-10		20	18	17.2
3-11		16		7.2
3-12		SP		7.4
ASH POND DISCHARGE				
3-13		62		56

PLANT THREE
CONCENTRATION OF 5 PHOSPHATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<4	<4	<0.3
3-4A (FILL)		<4	<4	
3-4B (RES./ROCK)		<4	<4	<0.3
DP-1				5.2
DP-2				<0.3
DP-8				<0.3
DP-9				<0.3
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<4	<4	<0.3
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<4	<4	<0.3
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		<4	<4	3.9
3-3 (RES.)		<4	<4	<0.3
ASH POND LIQUORS				
3-2 (16-18 FT)	<4			
3-2 (20-22 FT)	<4			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<4			
3-2A (24.5-26.4 FT)	<4			
3-3 (10-12 FT)	<4			
3-3 (22-24 FT)	<4			
3-3 (24-26 FT)	<4			
DOWNGRADIENT WELLS (RES.)				
3-5		<4		<0.3
3-6		<4		<0.3
3-6C		<4		
3-7A		<4	<4	<0.3
3-8		<4	<4	<0.3
3-9		<4	<4	<0.3
3-9A		<4	<4	<0.3
DOWNGRADIENT (ALL.)				
3-6A		<4	<4	3.6
DOWNGRADIENT (FILL)				
3-6B		<4	<4	<0.3
3-8A		<4	<4	<0.3
DOWNGRADIENT (DIKE)				
3-7		<4	<4	<0.3
TOE DRAINS				
3-10		<4	<4	<0.3
3-11		<4		<0.3
3-12		SP		<0.3
ASH POND DISCHARGE				
3-13		<4		<0.3

PLANT THREE
CONCENTRATION OF 6 BROMIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<5	<5	<0.3
3-4A (FILL)		<5	<5	
3-4B (RES./ROCK)		<5	<5	<0.3
DP-1				<0.3
DP-2				<0.3
DP-8				<0.3
DP-9				<0.3
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<5	<5	<0.3
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<5	<5	0.7
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		<5	<5	<0.3
3-3 (RES.)		<5	<5	<0.3
ASH POND LIQUORS				
3-2 (16-18 FT)	<5			
3-2 (20-22 FT)	<5			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<5			
3-2A (24.5-26.4 FT)	<5			
3-3 (10-12 FT)	<5			
3-3 (22-24 FT)	<5			
3-3 (24-26 FT)	<5			
DOWNGRADIENT WELLS (RES.)				
3-5		<5		<0.3
3-6		<5		<0.3
3-6C		<5		
3-7A		<5	<5	<0.3
3-8		<5	<5	<0.3
3-9		<5	<5	<0.3
3-9A		<5	<5	<0.3
DOWNGRADIENT (ALL.)				
3-6A		<5	<5	<0.3
DOWNGRADIENT (FILL)				
3-6B		<5	<5	<0.3
3-8A		<5	<5	<0.3
DOWNGRADIENT (DIKE)				
3-7		<5	<5	<0.3
TOE DRAINS				
3-10		<5	<5	<0.3
3-11		<5		<0.3
3-12		SP		<0.3
ASH POND DISCHARGE				
3-13		<5		<0.3

PLANT THREE
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.005	<0.005	<0.005
3-4A (FILL)		<0.005	<0.005	
3-4B (RES./ROCK)		<0.005	<0.005	<0.005
DP-1				<0.005
DP-2				<0.005
DP-8				<0.005
DP-9				<0.005
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.005	<0.005	<0.005
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.005	<0.005	<0.005
3-2 (ALL.) DIS. SOL.				<0.005
3-2A (ASH)		<0.005	<0.005	<0.005
3-3 (RES.)		<0.005	<0.005	<0.005
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.005			
3-2 (20-22 FT)	<0.005			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.005			
3-2A (24.5-26.4 FT)	<0.005			
3-3 (10-12 FT)	<0.005			
3-3 (22-24 FT)	<0.005			
3-3 (24-26 FT)	<0.005			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.005	<0.005	<0.005
3-6		<0.005	<0.005	<0.005
3-6C		<0.005		
3-7A		<0.005	<0.005	<0.005
3-8		<0.005	<0.005	<0.005
3-9		<0.005	<0.005	<0.005
3-9A		<0.005	<0.005	<0.005
DOWNGRADIENT (ALL.)				
3-6A		<0.005	0.008	<0.005
DOWNGRADIENT (FILL)				
3-6B		<0.005	<0.005	<0.005
3-8A		<0.005	<0.005	<0.005
DOWNGRADIENT (DIKE)				
3-7		<0.005	0.01	<0.005
TOE DRAINS				
3-10		<0.005	<0.005	<0.005
3-11		<0.005		<0.005
3-12				<0.005
ASH POND DISCHARGE				
3-13		<0.005		<0.005

PLANT THREE
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.3	<0.3	<0.3
3-4A (FILL)		<0.3	<0.3	
3-4B (RES./ROCK)		<0.3	<0.3	<0.3
DP-1				<0.3
DP-2				<0.3
DP-8				<0.3
DP-9				<0.3
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		8.11	9.28	11.9
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.3	<0.3	<0.3
3-2 (ALL.) DIS. SOL.				<0.3
3-2A (ASH)		0.25	0.2	<0.3
3-3 (RES.)		<0.3	<0.3	<0.3
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.3			
3-2 (20-22 FT)	0.97			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.3			
3-2A (24.5-26.4 FT)	0.38			
3-3 (10-12 FT)	<0.3			
3-3 (22-24 FT)	<0.3			
3-3 (24-26 FT)	<0.3			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.3	<0.3	<0.3
3-6		<0.3	<0.3	<0.3
3-6C		<0.3		
3-7A		<0.3	<0.3	<0.3
3-8		<0.3	<0.3	<0.3
3-9		<0.3	<0.3	<0.3
3-9A		<0.3	<0.3	<0.3
DOWNGRADIENT (ALL.)				
3-6A		<0.3	<0.3	<0.3
DOWNGRADIENT (FILL)				
3-6B		<0.3	<0.3	<0.3
3-8A		<0.3	<0.3	<0.3
DOWNGRADIENT (DIKE)				
3-7		<0.3	<0.3	<0.3
TOE DRAINS				
3-10		<0.3	<0.3	<0.3
3-11		<0.3		<0.3
3-12				<0.3
ASH POND DISCHARGE				
3-13		<0.3		<0.3

PLANT THREE
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		0.015	0.018	0.06
3-4A (FILL)		0.03	0.068	
3-4B (RES./ROCK)		<0.005	<0.005	0.016
DP-1				0.004
DP-2				<0.004
DP-8				<0.004
DP-9				0.005
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		1.82	1.71	1.87
ACTIVE ASH POND WELLS				
3-2 (ALL.)		0.057	0.058	0.076
3-2 (ALL.) DIS. SOL.				0.055
3-2A (ASH)		3.68	3.64	1.99
3-3 (RES.)		0.058	<0.005	0.119
ASH POND LIQUORS				
3-2 (16-18 FT)	1.08			
3-2 (20-22 FT)	2.11			
3-2 (24-26 FT)				
3-2 (38-40 FT)	3.4			
3-2A (24.5-26.4 FT)	2.15			
3-3 (10-12 FT)	2.54			
3-3 (22-24 FT)	1.39			
3-3 (24-26 FT)	1.86			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.005	<0.005	<0.004
3-6		0.007	<0.005	0.005
3-6C		0.009		
3-7A		0.05	0.05	0.148
3-8		0.924	0.955	0.999
3-9		0.06	0.019	0.116
3-9A		0.056	<0.005	0.196
DOWNGRADIENT (ALL.)				
3-6A		<0.005	<0.005	<0.004
DOWNGRADIENT (FILL)				
3-6B		0.005	<0.005	<0.004
3-8A		0.294	0.217	0.158
DOWNGRADIENT (DIKE)				
3-7		<0.005	<0.005	0.005
TOE DRAINS				
3-10		0.02	<0.005	0.068
3-11		0.03		0.059
3-12				0.535
ASH POND DISCHARGE				
3-13		0.238		0.205

PLANT THREE
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		0.11	0.085	0.101
3-4A (FILL)		0.07	0.109	
3-4B (RES./ROCK)		0.02	0.013	0.044
DP-1				0.02
DP-2				0.012
DP-8				0.016
DP-9				0.043
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		0.06	0.061	0.155
ACTIVE ASH POND WELLS				
3-2 (ALL.)		0.92	1.34	1.07
3-2 (ALL.) DIS. SOL.				1.01
3-2A (ASH)		0.37	0.423	0.298
3-3 (RES.)		<0.01	<0.005	0.063
ASH POND LIQUORS				
3-2 (16-18 FT)	0.22			
3-2 (20-22 FT)	0.15			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.39			
3-2A (24.5-26.4 FT)	0.15			
3-3 (10-12 FT)	0.25			
3-3 (22-24 FT)	0.23			
3-3 (24-26 FT)	0.25			
DOWNGRADIENT WELLS (RES.)				
3-5		0.02	0.013	0.026
3-6		0.05	0.037	0.058
3-6C		0.06		
3-7A		0.05	0.061	0.068
3-8		0.05	0.061	0.054
3-9		<0.01	<0.005	0.005
3-9A		0.02	0.013	0.024
DOWNGRADIENT (ALL.)				
3-6A		0.02	0.025	0.022
DOWNGRADIENT (FILL)				
3-6B		0.02	0.013	0.009
3-8A		0.01	0.012	0.031
DOWNGRADIENT (DIKE)				
3-7		0.02	0.013	0.016
TOE DRAINS				
3-10		0.02	0.037	0.031
3-11		0.03		0.028
3-12				0.01
ASH POND DISCHARGE				
3-13		0.1		0.111

PLANT THREE
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.0005	<0.0005	<0.0005
3-4A (FILL)		<0.0005	<0.0005	
3-4B (RES./ROCK)		<0.0005	<0.0005	<0.0005
DP-1				<0.0005
DP-2				<0.0005
DP-8				<0.0005
DP-9				<0.0005
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.0005	<0.0005	<0.0005
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.0005	<0.0005	<0.0005
3-2 (ALL.) DIS. SOL.				<0.0005
3-2A (ASH)		<0.0005	<0.0005	<0.0005
3-3 (RES.)		<0.0005	<0.0005	<0.0005
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.0005			
3-2 (20-22 FT)	<0.0005			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.0005			
3-2A (24.5-26.4 FT)	<0.0005			
3-3 (10-12 FT)	<0.0005			
3-3 (22-24 FT)	<0.0005			
3-3 (24-26 FT)	<0.0005			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.0005	<0.0005	<0.0005
3-6		<0.0005	<0.0005	<0.0005
3-6C		<0.0005		
3-7A		<0.0005	0.0009	<0.0005
3-8		<0.0005	<0.0005	<0.0005
3-9		<0.0005	<0.0005	<0.0005
3-9A		<0.0005	<0.0005	<0.0005
DOWNGRADIENT (ALL.)				
3-6A		<0.0005	<0.0005	<0.0005
DOWNGRADIENT (FILL)				
3-6B		<0.0005	0.0009	<0.0005
3-8A		<0.0005	<0.0005	<0.0005
DOWNGRADIENT (DIKE)				
3-7		<0.0005	<0.0005	<0.0005
TOE DRAINS				
3-10		<0.0005	<0.0005	<0.0005
3-11		<0.0005		<0.0005
3-12				<0.0005
ASH POND DISCHARGE				
3-13		<0.0005		<0.0005

PLANT THREE
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		8.93	6.54	11.5
3-4A (FILL)		9.13	12.3	
3-4B (RES./ROCK)		9.95	9.99	10.9
DP-1				5.43
DP-2				0.74
DP-8				6.83
DP-9				7.1
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		59.4	60.7	64.1
ACTIVE ASH POND WELLS				
3-2 (ALL.)		17	15.8	16.2
3-2 (ALL.) DIS. SOL.				14.6
3-2A (ASH)		126	129	63.7
3-3 (RES.)		3.77	2.55	3.83
ASH POND LIQUORS				
3-2 (16-18 FT)	49.2			
3-2 (20-22 FT)	72.6			
3-2 (24-26 FT)				
3-2 (38-40 FT)	89.6			
3-2A (24.5-26.4 FT)	66.2			
3-3 (10-12 FT)	55.7			
3-3 (22-24 FT)	52.6			
3-3 (24-26 FT)	59.3			
DOWNGRADIENT WELLS (RES.)				
3-5		0.79	0.88	0.57
3-6		16.5	16.4	18
3-6C		18.4		
3-7A		29.5	29.9	37.9
3-8		18.1	18.7	20.4
3-9		12.5	12.4	11.2
3-9A		4.83	4.55	5.19
DOWNGRADIENT (ALL.)				
3-6A		4.85	5.08	5.57
DOWNGRADIENT (FILL)				
3-6B		2.76	2.84	0.97
3-8A		30	32.5	27.8
DOWNGRADIENT (DIKE)				
3-7		0.44	0.32	0.34
TOE DRAINS				
3-10		57.4	57.6	56
3-11		66.9		70.8
3-12				51.2
ASH POND DISCHARGE				
3-13		21.4		19.6

PLANT THREE
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.007	<0.1	<0.01
3-4A (FILL)		<0.007	<0.1	
3-4B (RES./ROCK)		<0.007	<0.1	<0.01
DP-1				<0.01
DP-2				<0.01
DP-8				<0.01
DP-9				<0.01
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.007	<0.1	<0.01
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.007	<0.1	<0.01
3-2 (ALL.) DIS. SOL.				<0.01
3-2A (ASH)		<0.007	<0.1	<0.01
3-3 (RES.)		<0.007	<0.1	<0.01
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.007			
3-2 (20-22 FT)	<0.007			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.007			
3-2A (24.5-26.4 FT)	0.053			
3-3 (10-12 FT)	<0.007			
3-3 (22-24 FT)	<0.007			
3-3 (24-26 FT)	<0.007			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.007	<0.1	<0.01
3-6		<0.007	<0.1	<0.01
3-6C		<0.007		
3-7A		<0.007	<0.1	<0.01
3-8		<0.007	<0.1	<0.01
3-9		<0.007	<0.1	<0.01
3-9A		<0.007	<0.1	<0.01
DOWNGRADIENT (ALL.)				
3-6A		<0.007	<0.1	<0.01
DOWNGRADIENT (FILL)				
3-6B		<0.007	<0.1	<0.01
3-8A		<0.007	<0.1	<0.01
DOWNGRADIENT (DIKE)				
3-7		<0.007	<0.1	<0.01
TOE DRAINS				
3-10		<0.007	<0.1	<0.01
3-11		<0.007		<0.01
3-12				<0.01
ASH POND DISCHARGE				
3-13		<0.007		<0.01

PLANT THREE
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.05	<0.05	<0.05
3-4A (FILL)		<0.05	<0.05	
3-4B (RES./ROCK)		<0.05	<0.05	<0.05
DP-1				<0.05
DP-2				<0.05
DP-8				<0.05
DP-9				<0.05
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.05	<0.05	<0.05
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.05	<0.05	<0.05
3-2 (ALL.) DIS. SOL.				<0.05
3-2A (ASH)		<0.05	<0.05	<0.05
3-3 (RES.)		<0.05	<0.05	<0.05
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.05			
3-2 (20-22 FT)	<0.05			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.05			
3-2A (24.5-26.4 FT)	<0.05			
3-3 (10-12 FT)	<0.05			
3-3 (22-24 FT)	0.07			
3-3 (24-26 FT)	0.07			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.05	<0.05	<0.05
3-6		<0.05	<0.05	<0.05
3-6C		<0.05		
3-7A		<0.05	<0.05	<0.05
3-8		<0.05	<0.05	<0.05
3-9		<0.05	<0.05	<0.05
3-9A		<0.05	<0.05	<0.05
DOWNGRADIENT (ALL.)				
3-6A		<0.05	<0.05	<0.05
DOWNGRADIENT (FILL)				
3-6B		<0.05	<0.05	<0.05
3-8A		<0.05	<0.05	<0.05
DOWNGRADIENT (DIKE)				
3-7		<0.05	<0.05	<0.05
TOE DRAINS				
3-10		<0.05	<0.05	<0.05
3-11		<0.05		<0.05
3-12				<0.05
ASH POND DISCHARGE				
3-13		0.06		<0.05

PLANT THREE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.008	<0.01	<0.01
3-4A (FILL)		<0.008	0.01	
3-4B (RES./ROCK)		<0.008	<0.01	<0.01
DP-1				<0.01
DP-2				<0.01
DP-8				<0.01
DP-9				<0.01
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.008	<0.01	<0.01
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.008	0.02	<0.01
3-2 (ALL.) DIS. SOL.				<0.01
3-2A (ASH)		0.01	<0.01	<0.01
3-3 (RES.)		<0.008	<0.01	<0.01
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.008			
3-2 (20-22 FT)	<0.008			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.015			
3-2A (24.5-26.4 FT)	<0.008			
3-3 (10-12 FT)	0.017			
3-3 (22-24 FT)	0.013			
3-3 (24-26 FT)	0.011			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.008	<0.01	<0.01
3-6		<0.008	<0.01	<0.01
3-6C		<0.008		
3-7A		<0.008	<0.01	<0.01
3-8		<0.008	0.02	<0.01
3-9		<0.008	<0.01	<0.01
3-9A		<0.008	<0.01	<0.01
DOWNGRADIENT (ALL.)				
3-6A		<0.008	<0.01	<0.01
DOWNGRADIENT (FILL)				
3-6B		<0.008	<0.01	<0.01
3-8A		<0.008	0.02	<0.01
DOWNGRADIENT (DIKE)				
3-7		<0.008	<0.01	<0.01
TOE DRAINS				
3-10		<0.008	<0.01	<0.01
3-11		<0.008		<0.01
3-12				<0.01
ASH POND DISCHARGE				
3-13		0.01		<0.01

PLANT THREE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.008	<0.01	<0.01
3-4A (FILL)		<0.008	0.01	
3-4B (RES./ROCK)		<0.008	<0.01	<0.01
DP-1				<0.01
DP-2				<0.01
DP-8				<0.01
DP-9				<0.01
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.008	<0.01	<0.01
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.008	0.02	<0.01
3-2 (ALL.) DIS. SOL.				<0.01
3-2A (ASH)		0.01	<0.01	<0.01
3-3 (RES.)		<0.008	<0.01	<0.01
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.008			
3-2 (20-22 FT)	<0.008			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.015			
3-2A (24.5-26.4 FT)	<0.008			
3-3 (10-12 FT)	0.017			
3-3 (22-24 FT)	0.013			
3-3 (24-26 FT)	0.011			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.008	<0.01	<0.01
3-6		<0.008	<0.01	<0.01
3-6C		<0.008		
3-7A		<0.008	<0.01	<0.01
3-8		<0.008	0.02	<0.01
3-9		<0.008	<0.01	<0.01
3-9A		<0.008	<0.01	<0.01
DOWNGRADIENT (ALL.)				
3-6A		<0.008	<0.01	<0.01
DOWNGRADIENT (FILL)				
3-6B		<0.008	<0.01	<0.01
3-8A		<0.008	0.02	<0.01
DOWNGRADIENT (DIKE)				
3-7		<0.008	<0.01	<0.01
TOE DRAINS				
3-10		<0.008	<0.01	<0.01
3-11		<0.008		<0.01
3-12				<0.01
ASH POND DISCHARGE				
3-13		0.01		<0.01

PLANT THREE
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.008	<0.005	<0.008
3-4A (FILL)		<0.008	<0.005	
3-4B (RES./ROCK)		<0.008	<0.005	<0.008
DP-1				<0.008
DP-2				<0.008
DP-8				<0.008
DP-9				<0.008
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.008	<0.005	<0.008
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.008	<0.005	<0.008
3-2 (ALL.) DIS. SOL.				<0.008
3-2A (ASH)		<0.008	<0.005	<0.008
3-3 (RES.)		<0.008	<0.005	<0.008
ASH POND LIQUORS				
3-2 (16-18 FT)	0.016			
3-2 (20-22 FT)	<0.008			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.015			
3-2A (24.5-26.4 FT)	0.049			
3-3 (10-12 FT)	<0.008			
3-3 (22-24 FT)	<0.008			
3-3 (24-26 FT)	0.023			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.008	<0.005	<0.008
3-6		<0.008	<0.005	<0.008
3-6C		<0.008		
3-7A		0.013	<0.005	<0.008
3-8		<0.008	<0.005	<0.008
3-9		<0.008	<0.005	<0.008
3-9A		<0.008	<0.005	<0.008
DOWNGRADIENT (ALL.)				
3-6A		<0.008	<0.005	<0.008
DOWNGRADIENT (FILL)				
3-6B		<0.008	0.028	<0.008
3-8A		<0.008	<0.005	<0.008
DOWNGRADIENT (DIKE)				
3-7		<0.008	<0.005	<0.008
TOE DRAINS				
3-10		<0.008	<0.005	<0.008
3-11		<0.008		<0.008
3-12				<0.008
ASH POND DISCHARGE				
3-13		<0.008		<0.008

PLANT THREE
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS				
	12881	22381	32381	71482	
BACKGROUND WELLS					
3-4 (ALL.)		4.46	1.93	7.1	
3-4A (FILL)		9.22	16.5		
3-4B (RES./ROCK)		<0.01	<0.01	<0.01	
DP-1				<0.01	
DP-2				<0.01	
DP-8				<0.01	
DP-9				<0.01	
RETIRED ASH POND					
3-1 (ASH,ALL.,RES.)		0.01	<0.01	<0.01	
ACTIVE ASH POND WELLS					
3-2 (ALL.)		3.03	26.9	10.3	
3-2 (ALL.) DIS. SOL.				25.9	
3-2A (ASH)		0.02	<0.01	0.02	
3-3 (RES.)		0.93	1.39	0.08	
ASH POND LIQUORS					
3-2 (16-18 FT)	0.01				
3-2 (20-22 FT)	0.02				
3-2 (24-26 FT)					
3-2 (38-40 FT)	0.01				
3-2A (24.5-26.4 FT)	0.03				
3-3 (10-12 FT)	0.02				
3-3 (22-24 FT)	0.02				
3-3 (24-26 FT)	0.03				
DOWNGRADIENT WELLS (RES.)					
3-5		0.02	<0.01	<0.01	
3-6		<0.01	<0.01	0.01	
3-6C		0.02			
3-7A		<0.01	<0.01	0.02	
3-8		<0.01	<0.01	<0.01	
3-9		5.68	9.12	14.4	
3-9A		0.05	<0.01	0.02	
DOWNGRADIENT (ALL.)					
3-6A		<0.01	<0.01	<0.01	
DOWNGRADIENT (FILL)					
3-6B		0.15	0.24	0.76	
3-8A		23.7	24.5	16.2	
DOWNGRADIENT (DIKE)					
3-7		<0.01	<0.01	<0.01	
TOE DRAINS					
3-10		<0.01	<0.01	0.13	
3-11		0.03		0.05	
3-12				<0.01	
ASH POND DISCHARGE					
3-13		0.02		<0.01	

PLANT THREE
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	.32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		1	<1	2
3-4A (FILL)		3	1	
3-4B (RES./ROCK)		<1	<1	2
DP-1				<1
DP-2				<1
DP-8				<1
DP-9				2
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		24	25	30
ACTIVE ASH POND WELLS				
3-2 (ALL.)		7	6	8
3-2 (ALL.) DIS. SOL.				7
3-2A (ASH)		11	10	9
3-3 (RES.)		1	<1	4
ASH POND LIQUORS				
3-2 (16-18 FT)	14			
3-2 (20-22 FT)	15			
3-2 (24-26 FT)				
3-2 (38-40 FT)	10			
3-2A (24.5-26.4 FT)	17			
3-3 (10-12 FT)	11			
3-3 (22-24 FT)	16			
3-3 (24-26 FT)	14			
DOWNGRADIENT WELLS (RES.)				
3-5		<1	<1	<1
3-6		3	1	2
3-6C		2		
3-7A		3	3	3
3-8		3	3	3
3-9		<1	<1	<1
3-9A		<1	<1	<1
DOWNGRADIENT (ALL.)				
3-6A		<1	<1	<1
DOWNGRADIENT (FILL)				
3-6B		<1	<1	<1
3-8A		<1	<1	1
DOWNGRADIENT (DIKE)				
3-7		<1	<1	1
TOE DRAINS				
3-10		2	<1	3
3-11		1		1
3-12				3
ASH POND DISCHARGE				
3-13		8		7

PLANT THREE
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		6.98	4.96	5.83
3-4A (FILL)		7.12	11.6	
3-4B (RES./ROCK)		3.66	4.31	2.44
DP-1				2.98
DP-2				0.25
DP-8				1.2
DP-9				1.72
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		0.11	0.03	0.04
ACTIVE ASH POND WELLS				
3-2 (ALL.)		9.66	11.4	11.7
3-2 (ALL.) DIS. SOL.				10.8
3-2A (ASH)		10.5	11.7	6
3-3 (RES.)		1.16	0.99	0.87
ASH POND LIQUORS				
3-2 (16-18 FT)	2.53			
3-2 (20-22 FT)	2.84			
3-2 (24-26 FT)				
3-2 (38-40 FT)	19.5			
3-2A (24.5-26.4 FT)	3.3			
3-3 (10-12 FT)	22.1			
3-3 (22-24 FT)	7.63			
3-3 (24-26 FT)	8.33			
DOWNGRADIENT WELLS (RES.)				
3-5		1.23	1.59	0.93
3-6		6.31	7.23	5.99
3-6C		6.4		
3-7A		7.92	9.28	9.27
3-8		4.45	5.35	4.61
3-9		7.94	8.72	7.13
3-9A		3.29	3.45	2.98
DOWNGRADIENT (ALL.)				
3-6A		1.69	2	1.55
DOWNGRADIENT (FILL)				
3-6B		1.01	1.21	0.33
3-8A		8.56	10.7	9.27
DOWNGRADIENT (DIKE)				
3-7		0.75	0.85	0.69
TOE DRAINS				
3-10		7.91	8.15	5.86
3-11		9.3		8.53
3-12				4.38
ASH POND DISCHARGE				
3-13		2.69		2.3

PLANT THREE
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		11.1	3.52	7.11
3-4A (FILL)		3.56	7.36	
3-4B (RES./ROCK)		0.014	0.07	<0.01
DP-1				0.02
DP-2				<0.01
DP-8				<0.01
DP-9				<0.01
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.008	<0.01	<0.01
ACTIVE ASH POND WELLS				
3-2 (ALL.)		14	13.6	6.44
3-2 (ALL.) DIS. SOL.				6.2
3-2A (ASH)		0.058	0.07	0.16
3-3 (RES.)		2.18	1.87	0.54
ASH POND LIQUORS				
3-2 (16-18 FT)	0.019			
3-2 (20-22 FT)	0.01			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.17			
3-2A (24.5-26.4 FT)	0.081			
3-3 (10-12 FT)	0.257			
3-3 (22-24 FT)	0.098			
3-3 (24-26 FT)	0.164			
DOWNGRADIENT WELLS (RES.)				
3-5		0.034	0.05	0.02
3-6		0.029	0.03	<0.01
3-6C		0.252		
3-7A		0.024	0.03	<0.01
3-8		0.05	0.07	0.02
3-9		2.55	2.71	2.72
3-9A		0.103	0.1	0.05
DOWNGRADIENT (ALL.)				
3-6A		<0.008	0.03	<0.01
DOWNGRADIENT (FILL)				
3-6B		0.075	0.12	0.07
3-8A		4.79	5.09	4.23
DOWNGRADIENT (DIKE)				
3-7		0.057	0.05	0.05
TOE DRAINS				
3-10		<0.008	0.03	0.72
3-11		0.045		0.37
3-12				<0.01
ASH POND DISCHARGE				
3-13		0.088		<0.01

PLANT THREE
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.3	<0.2	<0.3
3-4A (FILL)		<0.3	<0.2	
3-4B (RES./ROCK)		<0.3	<0.2	<0.3
DP-1				<0.3
DP-2				<0.3
DP-8				<0.3
DP-9				<0.3
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		0.6	<0.2	0.7
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.3	<0.2	<0.3
3-2 (ALL.) DIS. SOL.				<0.3
3-2A (ASH)		0.9	0.7	0.5
3-3 (RES.)		<0.3	<0.2	<0.3
ASH POND LIQUORS				
3-2 (16-18 FT)	0.3			
3-2 (20-22 FT)	0.4			
3-2 (24-26 FT)				
3-2 (38-40 FT)	1			
3-2A (24.5-26.4 FT)	0.6			
3-3 (10-12 FT)	0.9			
3-3 (22-24 FT)	0.4			
3-3 (24-26 FT)	0.6			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.3	<0.2	<0.3
3-6		<0.3	<0.2	<0.3
3-6C		<0.3		
3-7A		<0.3	<0.2	<0.3
3-8		<0.3	<0.2	<0.3
3-9		<0.3	<0.2	<0.3
3-9A		<0.3	<0.2	<0.3
DOWNGRADIENT (ALL.)				
3-6A		<0.3	<0.2	<0.3
DOWNGRADIENT (FILL)				
3-6B		<0.3	<0.2	<0.3
3-8A		<0.3	<0.2	<0.3
DOWNGRADIENT (DIKE)				
3-7		<0.3	<0.2	<0.3
TOE DRAINS				
3-10		<0.3	<0.2	<0.3
3-11		<0.3		<0.3
3-12				<0.3
ASH POND DISCHARGE				
3-13		<0.3		<0.3

PLANT THREE
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		14	11	19
3-4A (FILL)		6	3	
3-4B (RES./ROCK)		12	10	12
DP-1				6
DP-2				1
DP-8				5
DP-9				8
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		11	9	13
ACTIVE ASH POND WELLS				
3-2 (ALL.)		9	5	8
3-2 (ALL.) DIS. SOL.				7
3-2A (ASH)		5	2	10
3-3 (RES.)		8	7	14
ASH POND LIQUORS				
3-2 (16-18 FT)	19			
3-2 (20-22 FT)	13			
3-2 (24-26 FT)				
3-2 (38-40 FT)	8			
3-2A (24.5-26.4 FT)	15			
3-3 (10-12 FT)	7			
3-3 (22-24 FT)	13			
3-3 (24-26 FT)	12			
DOWNGRADIENT WELLS (RES.)				
3-5		2	<2	2
3-6		10	8	10
3-6C		9		
3-7A		10	9	11
3-8		15	14	12
3-9		3	<2	3
3-9A		4	2	4
DOWNGRADIENT (ALL.)				
3-6A		6	6	7
DOWNGRADIENT (FILL)				
3-6B		6	5	6
3-8A		8	6	10
DOWNGRADIENT (DIKE)				
3-7		3	<2	3
TOE DRAINS				
3-10		5	4	8
3-11		8		8
3-12				6
ASH POND DISCHARGE				
3-13		16		14

PLANT THREE
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.01	<0.05	<0.05
3-4A (FILL)		<0.01	<0.05	
3-4B (RES./ROCK)		<0.01	<0.05	<0.05
DP-1				<0.05
DP-2				<0.05
DP-8				<0.05
DP-9				<0.05
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.01	<0.05	<0.05
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.01	<0.05	<0.05
3-2 (ALL.) DIS. SOL.				<0.05
3-2A (ASH)		0.02	<0.05	<0.05
3-3 (RES.)		<0.01	<0.05	<0.05
ASH POND LIQUORS				
3-2 (16-18 FT)	0.03			
3-2 (20-22 FT)	0.04			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.04			
3-2A (24.5-26.4 FT)	0.34			
3-3 (10-12 FT)	0.05			
3-3 (22-24 FT)	0.03			
3-3 (24-26 FT)	0.07			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.01	<0.05	<0.05
3-6		<0.01	<0.05	<0.05
3-6C		0.02		
3-7A		<0.01	<0.05	<0.05
3-8		<0.01	<0.05	<0.05
3-9		<0.01	<0.05	<0.05
3-9A		<0.01	<0.05	<0.05
DOWNGRADIENT (ALL.)				
3-6A		<0.01	<0.05	<0.05
DOWNGRADIENT (FILL)				
3-6B		<0.01	<0.05	<0.05
3-8A		<0.01	<0.05	<0.05
DOWNGRADIENT (DIKE)				
3-7		<0.01	<0.05	<0.05
TOE DRAINS				
3-10		<0.01	<0.05	<0.05
3-11		<0.01		<0.05
3-12				<0.05
ASH POND DISCHARGE				
3-13		<0.01		<0.05

PLANT THREE
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.6	<0.5	<0.6
3-4A (FILL)		<0.6	<0.5	
3-4B (RES./ROCK)		<0.6	<0.5	<0.6
DP-1				<0.6
DP-2				<0.6
DP-8				<0.6
DP-9				<0.6
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.6	<0.5	<0.6
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.6	<0.5	<0.6
3-2 (ALL.) DIS. SOL.				<0.6
3-2A (ASH)		0.6	0.8	0.7
3-3 (RES.)		<0.6	<0.5	<0.6
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.6			
3-2 (20-22 FT)	<0.6			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.6			
3-2A (24.5-26.4 FT)	<0.6			
3-3 (10-12 FT)	<0.6			
3-3 (22-24 FT)	<0.6			
3-3 (24-26 FT)	<0.6			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.6	<0.5	<0.6
3-6		<0.6	<0.5	<0.6
3-6C		<0.6		
3-7A		<0.6	<0.5	<0.6
3-8		<0.6	<0.5	<0.6
3-9		<0.6	<0.5	<0.6
3-9A		<0.6	<0.5	<0.6
DOWNGRADIENT (ALL.)				
3-6A		<0.6	0.5	<0.6
DOWNGRADIENT (FILL)				
3-6B		<0.6	<0.5	<0.6
3-8A		<0.6	<0.5	<0.6
DOWNGRADIENT (DIKE)				
3-7		<0.6	<0.5	<0.6
TOE DRAINS				
3-10		<0.6	<0.5	<0.6
3-11		<0.6		<0.6
3-12				<0.6
ASH POND DISCHARGE				
3-13		<0.6		<0.6

PLANT THREE
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.05	<0.05	<0.05
3-4A (FILL)		<0.05	<0.05	
3-4B (RES./ROCK)		<0.05	<0.05	<0.05
DP-1				<0.05
DP-2				<0.05
DP-8				<0.05
DP-9				<0.05
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.05	<0.05	<0.05
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.05	<0.05	<0.05
3-2 (ALL.) DIS. SOL.				<0.05
3-2A (ASH)		<0.05	<0.05	<0.05
3-3 (RES.)		<0.05	<0.05	<0.05
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.05			
3-2 (20-22 FT)	<0.05			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.05			
3-2A (24.5-26.4 FT)	<0.05			
3-3 (10-12 FT)	<0.05			
3-3 (22-24 FT)	<0.05			
3-3 (24-26 FT)	<0.05			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.05	<0.05	<0.05
3-6		<0.05	<0.05	<0.05
3-6C		<0.05		
3-7A		<0.05	<0.05	<0.05
3-8		<0.05	<0.05	<0.05
3-9		<0.05	<0.05	<0.05
3-9A		<0.05	<0.05	<0.05
DOWNGRADIENT (ALL.)				
3-6A		<0.05	<0.05	<0.05
DOWNGRADIENT (FILL)				
3-6B		<0.05	<0.05	<0.05
3-8A		<0.05	<0.05	<0.05
DOWNGRADIENT (DIKE)				
3-7		<0.05	<0.05	<0.05
TOE DRAINS				
3-10		<0.05	<0.05	<0.05
3-11		<0.05		<0.05
3-12				<0.05
ASH POND DISCHARGE				
3-13		<0.05		<0.05

PLANT THREE
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		16.6	20.5	12.3
3-4A (FILL)		3.38	4.2	
3-4B (RES./ROCK)		29.5	32.1	25.8
DP-1				18.3
DP-2				5.82
DP-8				18.9
DP-9				16.9
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		1.24	1.8	2.05
ACTIVE ASH POND WELLS				
3-2 (ALL.)		4.76	6.28	5.82
3-2 (ALL.) DIS. SOL.				5.45
3-2A (ASH)		1.65	2.04	3.61
3-3 (RES.)		2.69	3.21	4.4
ASH POND LIQUORS				
3-2 (16-18 FT)	1.7			
3-2 (20-22 FT)	0.92			
3-2 (24-26 FT)				
3-2 (38-40 FT)	2.08			
3-2A (24.5-26.4 FT)	0.92			
3-3 (10-12 FT)	2.99			
3-3 (22-24 FT)	2.11			
3-3 (24-26 FT)	2			
DOWNGRADIENT WELLS (RES.)				
3-5		6.96	7.7	6.86
3-6		23.4	26.7	23.9
3-6C		22.6		
3-7A		14	16.2	14.2
3-8		9.17	11	9.65
3-9		2.06	2.37	2.43
3-9A		7.51	8.7	7.65
DOWNGRADIENT (ALL.)				
3-6A		20.5	23.2	20.3
DOWNGRADIENT (FILL)				
3-6B		15.4	17.7	17.1
3-8A		1.8	2.12	2.25
DOWNGRADIENT (DIKE)				
3-7		3.85	4.62	4.03
TOE DRAINS				
3-10		6.75	10.2	14.5
3-11		11.2		12.3
3-12				3.43
ASH POND DISCHARGE				
3-13		4		3.71

PLANT THREE
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		0.114	0.099	0.145
3-4A (FILL)		0.048	0.078	
3-4B (RES./ROCK)		0.141	0.166	0.162
DP-1				0.077
DP-2				0.008
DP-8				0.06
DP-9				0.075
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		3.6	4.71	4.63
ACTIVE ASH POND WELLS				
3-2 (ALL.)		0.25	0.274	0.241
3-2 (ALL.) DIS. SOL.				0.218
3-2A (ASH)		3.71	4.13	1.35
3-3 (RES.)		0.007	0.008	0.053
ASH POND LIQUORS				
3-2 (16-18 FT)	1.44			
3-2 (20-22 FT)	2.05			
3-2 (24-26 FT)				
3-2 (38-40 FT)	2.27			
3-2A (24.5-26.4 FT)	2.02			
3-3 (10-12 FT)	2.14			
3-3 (22-24 FT)	1.19			
3-3 (24-26 FT)	1.39			
DOWNGRADIENT WELLS (RES.)				
3-5		0.007	0.011	0.012
3-6		0.139	0.164	0.146
3-6C		0.142		
3-7A		0.35	0.409	0.411
3-8		0.231	0.278	0.241
3-9		0.099	0.107	0.078
3-9A		0.113	0.125	0.113
DOWNGRADIENT (ALL.)				
3-6A		0.075	0.094	0.088
DOWNGRADIENT (FILL)				
3-6B		0.033	0.039	0.016
3-8A		0.069	0.106	0.075
DOWNGRADIENT (DIKE)				
3-7		0.005	0.01	0.008
TOE DRAINS				
3-10		0.072	0.114	0.086
3-11		0.143		0.137
3-12				0.036
ASH POND DISCHARGE				
3-13		0.342		0.297

PLANT THREE
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.01	<0.01	<0.01
3-4A (FILL)		<0.01	<0.01	
3-4B (RES./ROCK)		<0.01	<0.01	0.01
DP-1				<0.01
DP-2				<0.01
DP-8				<0.01
DP-9				0.03
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.01	<0.01	0.01
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.01	<0.01	<0.01
3-2 (ALL.) DIS. SOL.				<0.01
3-2A (ASH)		0.01	<0.01	<0.01
3-3 (RES.)		<0.01	<0.01	<0.01
ASH POND LIQUORS				
3-2 (16-18 FT)	0.02			
3-2 (20-22 FT)	0.03			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.02			
3-2A (24.5-26.4 FT)	0.02			
3-3 (10-12 FT)	0.02			
3-3 (22-24 FT)	0.05			
3-3 (24-26 FT)	0.04			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.01	<0.01	<0.01
3-6		<0.01	<0.01	<0.01
3-6C		<0.01		
3-7A		<0.01	<0.01	0.01
3-8		<0.01	<0.01	0.02
3-9		0.01	<0.01	<0.01
3-9A		<0.01	<0.01	<0.01
DOWNGRADIENT (ALL.)				
3-6A		<0.01	<0.01	<0.01
DOWNGRADIENT (FILL)				
3-6B		<0.01	<0.01	<0.01
3-8A		<0.01	<0.01	0.01
DOWNGRADIENT (DIKE)				
3-7		<0.01	<0.01	0.02
TOE DRAINS				
3-10		<0.01	<0.01	0.03
3-11		<0.01		0.04
3-12				0.02
ASH POND DISCHARGE				
3-13		0.02		0.03

NOTE: Values above detection limit may not be real since blanks showed levels of 0.01 to 0.03.

PLANT THREE
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.005	<0.005	<0.005
3-4A (FILL)		<0.005	<0.005	
3-4B (RES./ROCK)		<0.005	<0.005	<0.005
DP-1				<0.005
DP-2				<0.005
DP-8				<0.005
DP-9				<0.005
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.005	<0.005	<0.005
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.005	<0.005	<0.005
3-2 (ALL.) DIS. SOL.				<0.005
3-2A (ASH)		<0.005	<0.005	<0.005
3-3 (RES.)		<0.005	<0.005	<0.005
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.005			
3-2 (20-22 FT)	<0.005			
3-2 (24-26 FT)				
3-2 (38-40 FT)	1			
3-2A (24.5-26.4 FT)	<0.005			
3-3 (10-12 FT)	<0.005			
3-3 (22-24 FT)	<0.005			
3-3 (24-26 FT)	<0.005			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.005	<0.005	<0.005
3-6		<0.005	<0.005	<0.005
3-6C		<0.005		
3-7A		<0.005	<0.005	<0.005
3-8		<0.005	<0.005	<0.005
3-9		<0.005	<0.005	<0.005
3-9A		<0.005	<0.005	<0.005
DOWNGRADIENT (ALL.)				
3-6A		<0.005	<0.005	<0.005
DOWNGRADIENT (FILL)				
3-6B		<0.005	<0.005	<0.005
3-8A		<0.005	<0.005	<0.005
DOWNGRADIENT (DIKE)				
3-7		<0.005	<0.005	<0.005
TOE DRAINS				
3-10		<0.005	<0.005	<0.005
3-11		<0.005		<0.005
3-12				<0.005
ASH POND DISCHARGE				
3-13		<0.005		<0.005

PLANT THREE
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.005	<0.005	<0.005
3-4A (FILL)		<0.005	<0.005	
3-4B (RES./ROCK)		<0.005	<0.005	0.016
DP-1				0.008
DP-2				<0.005
DP-8				<0.005
DP-9				0.009
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		0.029	0.018	0.034
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.005	<0.005	<0.005
3-2 (ALL.) DIS. SOL.				<0.005
3-2A (ASH)		0.035	0.037	0.043
3-3 (RES.)		<0.005	<0.005	<0.005
ASH POND LIQUORS				
3-2 (16-18 FT)	0.029			
3-2 (20-22 FT)	0.009			
3-2 (24-26 FT)				
3-2 (38-40 FT)	0.014			
3-2A (24.5-26.4 FT)	0.042			
3-3 (10-12 FT)	<0.005			
3-3 (22-24 FT)	0.313			
3-3 (24-26 FT)	0.132			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.005	<0.005	0.007
3-6		<0.005	<0.005	0.014
3-6C		<0.005		
3-7A		<0.005	<0.005	0.006
3-8		<0.005	<0.005	<0.005
3-9		<0.005	<0.005	<0.005
3-9A		<0.005	<0.005	<0.005
DOWNGRADIENT (ALL.)				
3-6A		<0.005	<0.005	0.007
DOWNGRADIENT (FILL)				
3-6B		<0.005	<0.005	<0.005
3-8A		<0.005	<0.005	<0.005
DOWNGRADIENT (DIKE)				
3-7		<0.005	<0.005	<0.005
TOE DRAINS				
3-10		<0.005	<0.005	0.008
3-11		<0.005		0.007
3-12				<0.005
ASH POND DISCHARGE				
3-13		0.03		0.047

PLANT THREE
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.02	<0.05	0.25
3-4A (FILL)		0.03	<0.05	
3-4B (RES./ROCK)		<0.02	<0.05	<0.05
DP-1				<0.05
DP-2				<0.05
DP-8				<0.05
DP-9				<0.05
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.02	<0.05	<0.05
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.02	<0.05	<0.05
3-2 (ALL.) DIS. SOL.				<0.05
3-2A (ASH)		<0.02	<0.05	<0.05
3-3 (RES.)		<0.02	<0.05	<0.05
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.02			
3-2 (20-22 FT)	<0.02			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.02			
3-2A (24.5-26.4 FT)	0.03			
3-3 (10-12 FT)	<0.02			
3-3 (22-24 FT)	<0.02			
3-3 (24-26 FT)	<0.02			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.02	<0.05	<0.05
3-6		<0.02	<0.05	<0.05
3-6C		<0.02		
3-7A		<0.02	<0.05	<0.05
3-8		<0.02	<0.05	<0.05
3-9		<0.02	<0.05	<0.05
3-9A		<0.02	<0.05	<0.05
DOWNGRADIENT (ALL.)				
3-6A		<0.02	<0.05	<0.05
DOWNGRADIENT (FILL)				
3-6B		<0.02	<0.05	<0.05
3-8A		<0.02	<0.05	<0.05
DOWNGRADIENT (DIKE)				
3-7		<0.02	<0.05	<0.05
TOE DRAINS				
3-10		<0.02	<0.05	<0.05
3-11		<0.02		<0.05
3-12				<0.05
ASH POND DISCHARGE				
3-13		<0.02		<0.05

PLANT THREE
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		<0.05	<0.02	<0.05
3-4A (FILL)		<0.05	<0.02	
3-4B (RES./ROCK)		<0.05	<0.02	<0.05
DP-1				<0.05
DP-2				<0.05
DP-8				<0.05
DP-9				<0.05
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.05	<0.02	<0.05
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.05	<0.02	<0.05
3-2 (ALL.) DIS. SOL.				<0.05
3-2A (ASH)		<0.05	<0.02	<0.05
3-3 (RES.)		<0.05	<0.02	<0.05
ASH POND LIQUORS				
3-2 (16-18 FT)	<0.05			
3-2 (20-22 FT)	<0.05			
3-2 (24-26 FT)				
3-2 (38-40 FT)	<0.05			
3-2A (24.5-26.4 FT)	<0.05			
3-3 (10-12 FT)	<0.05			
3-3 (22-24 FT)	<0.05			
3-3 (24-26 FT)	<0.05			
DOWNGRADIENT WELLS (RES.)				
3-5		<0.05	<0.02	<0.05
3-6		<0.05	<0.02	<0.05
3-6C		<0.05		
3-7A		<0.05	<0.02	<0.05
3-8		<0.05	<0.02	<0.05
3-9		<0.05	<0.02	<0.05
3-9A		<0.05	<0.02	<0.05
DOWNGRADIENT (ALL.)				
3-6A		<0.05	<0.02	<0.05
DOWNGRADIENT (FILL)				
3-6B		<0.05	<0.02	<0.05
3-8A		<0.05	<0.02	<0.05
DOWNGRADIENT (DIKE)				
3-7		<0.05	<0.02	<0.05
TOE DRAINS				
3-10		<0.05	<0.02	<0.05
3-11		<0.05		<0.05
3-12				<0.05
ASH POND DISCHARGE				
3-13		<0.05		<0.05

PLANT THREE
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)			<0.2	
3-4A (FILL)			<0.2	
3-4B (RES./ROCK)			<0.2	7
DP-1				
DP-2				
DP-8				0.2
DP-9				
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		57.2	56.3	
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.15	1.6	
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		1550	2425	318
3-3 (RES.)		1	1	
ASH POND LIQUORS				
3-2 (16-18 FT)	101			
3-2 (20-22 FT)	89			
3-2 (24-26 FT)	56			
3-2 (38-40 FT)	1525			
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)	975			
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5				
3-6				
3-6C				
3-7A		<0.15	0.78	<0.1
3-8		1	0.7	0.1
3-9			<0.2	
3-9A			<0.2	<0.1
DOWNGRADIENT (ALL.)				
3-6A			<0.2	
DOWNGRADIENT (FILL)				
3-6B			<0.2	
3-8A			<0.2	
DOWNGRADIENT (DIKE)				
3-7				
TOE DRAINS				
3-10			<0.2	
3-11		<0.2		
3-12		SP		
ASH POND DISCHARGE				
3-13		58		

PLANT THREE
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)			<0.26	
3-4A (FILL)			<0.26	
3-4B (RES./ROCK)			<0.26	0.7
DP-1				
DP-2				
DP-8				<0.1
DP-9				
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		<0.26		
ACTIVE ASH POND WELLS				
3-2 (ALL.)		<0.26		
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		3	<2	6.6
3-3 (RES.)		<0.26		
ASH POND LIQUORS				
3-2 (16-18 FT)	<2			
3-2 (20-22 FT)	3			
3-2 (24-26 FT)	8			
3-2 (38-40 FT)	3			
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)	<2			
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5				
3-6				
3-6C				
3-7A		<0.26		<0.1
3-8			<0.26	<0.1
3-9				
3-9A				<0.1
DOWNGRADIENT (ALL.)				
3-6A				
DOWNGRADIENT (FILL)				
3-6B				
3-8A				
DOWNGRADIENT (DIKE)				
3-7				
TOE DRAINS				
3-10				
3-11				
3-12		SP		
ASH POND DISCHARGE				
3-13		8		

PLANT THREE
CONCENTRATION OF 37 PH LAB

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)			5.8	
3-4A (FILL)			5.9	
3-4B (RES./ROCK)			5.9	
DP-1				
DP-2				
DP-8				
DP-9				
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)			10.2	
ACTIVE ASH POND WELLS				
3-2 (ALL.)			6.4	
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)			8.3	
3-3 (RES.)			6.3	
ASH POND LIQUORS				
3-2 (16-18 FT)				
3-2 (20-22 FT)				
3-2 (24-26 FT)				
3-2 (38-40 FT)				
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)				
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5			4.9	
3-6			6.5	
3-6C				
3-7A			6.5	
3-8			6.1	
3-9			6.3	
3-9A			5.8	
DOWNGRADIENT (ALL.)				
3-6A			6	
DOWNGRADIENT (FILL)				
3-6B			5.5	
3-8A			6.1	
DOWNGRADIENT (DIKE)				
3-7			4.7	
TOE DRAINS				
3-10			7.5	
3-11				
3-12				
ASH POND DISCHARGE				
3-13				

PLANT THREE
CONCENTRATION OF 38 PH FIELD -

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		6.1	*	
3-4A (FILL)		5.6	5.7	
3-4B (RES./ROCK)		6.2	6.3	6.7
DP-1				7.4
DP-2				7.2
DP-8				7.6
DP-9				7.6
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		10.5	11.4	10.6
ACTIVE ASH POND WELLS				
3-2 (ALL.)		6.5	6.9	7.5
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		8.5	8.3	9.2
3-3 (RES.)		6.4	6.8	7.1
ASH POND LIQUORS				
3-2 (16-18 FT)				
3-2 (20-22 FT)				
3-2 (24-26 FT)				
3-2 (38-40 FT)				
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)				
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5		5.1		5.4
3-6		6.3		7.1
3-6C		7.3		
3-7A		6.9	6.3	6.9
3-8		6.6	6.3	5.9
3-9		7	*	6.6
3-9A		5.9	5.8	6.3
DOWNGRADIENT (ALL.)				
3-6A		6.3	5.8	6
DOWNGRADIENT (FILL)				
3-6B		5.9	6	5.5
3-8A		6.5	6.4	6.4
DOWNGRADIENT (DIKE)				
3-7		4.4	4.9	5.4
TOE DRAINS				
3-10		7	7.8	7.2
3-11		7.6		7.7
3-12				7.7
ASH POND DISCHARGE				
3-13		8		8.9

PLANT THREE
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS			
	12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)	220	205		
3-4A (FILL)		250	190	
3-4B (RES./ROCK)	129	130	117	130
DP-1				80
DP-2				17
DP-8				68
DP-9				85
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		525	560	580
ACTIVE ASH POND WELLS				
3-2 (ALL.)		350	395	430
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)		770	675	440
3-3 (RES.)		82	68	115
ASH POND LIQUORS				
3-2 (16-18 FT)				
3-2 (20-22 FT)				
3-2 (24-26 FT)				
3-2 (38-40 FT)				
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)				
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5	73	29		22
3-6	137	117		180
3-6C	173	183		
3-7A	105	265	230	270
3-8	202	240	205	220
3-9	113	210		171
3-9A	111	72	68	74
DOWNGRADIENT (ALL.)				
3-6A	131	68	65	70
DOWNGRADIENT (FILL)				
3-6B	94	57	57	38
3-8A	192	370	325	290
DOWNGRADIENT (DIKE)				
3-7	29	30	29	34
TOE DRAINS				
3-10		310	310	340
3-11		445		410
3-12				320
ASH POND DISCHARGE				
3-13		225		220

PLANT THREE
CONCENTRATION OF 41 GROUNDWATER LEVEL FT (Mean Sea Level)

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)		627.3	627.5	
3-4A (FILL)		623.7	627.7	
3-4B (RES./ROCK)		627.1	626.9	
DP-1				
DP-2				
DP-8				
DP-9				
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)		604.9	604.4	609.5
ACTIVE ASH POND WELLS				
3-2 (ALL.)		623.4	623.3	625.6
3-2 (ALL.) DIS. SOL.				629.4
3-2A (ASH)		624.5	624.7	629
3-3 (RES.)		623	623.9	625.4
ASH POND LIQUORS				
3-2 (16-18 FT)				
3-2 (20-22 FT)				
3-2 (24-26 FT)				
3-2 (38-40 FT)				
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)				
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5		612.7	613.1	615.7
3-6		574.1	573.6	573.8
3-6C				
3-7A		578.3	582.2	577.2
3-8		578.3	580.4	578.1
3-9		569.8	568.9	569.4
3-9A		569.4	568.5	568.5
DOWNGRADIENT (ALL.)				
3-6A		571.6	571.3	571.7
DOWNGRADIENT (FILL)				
3-6B		571.6	570.6	571.6
3-8A		571.5	563.5	570.4
DOWNGRADIENT (DIKE)				
3-7		578.1	577.2	577.5
TOE DRAINS				
3-10				
3-11				
3-12				
ASH POND DISCHARGE				
3-13				

SUMMARY OF GROUNDWATER LEVELS - ALLEN

(in feet from top of casing)*

ADL Wells	TOC	Date 1/28/81	2/23/81	3/23/81	7/14/82
3-1	622.5	18.0(604.5)	17.6(604.9)	18.1(604.4)	13.0(609.5)
3-2	627.4	35.2(592.2)	3.6(623.8)	4.1(623.3)	1.8(625.6)
3-2A	625.5	5.4(620.1)	1.0(624.5)	0.8(624.7)	1.7(629.0)
3-3	627.7	40.2(587.5)	3.7(624.0)	3.9(623.8)	2.3(625.4)
3-4	628.8	1.9(628.9)	1.5(627.3)	1.3(627.5)	-
3-4A	628.6	7.7(620.9)	4.9(623.7)	5.8(627.7)	-
3-4B	628.6	2.5(626.1)	1.5(627.1)	3.2(626.9)	-
3-5	635.2	23.1(612.1)	22.5(612.7)	22.1(613.1)	19.5(615.7)
3-6	578.5	5.0(573.5)	4.4(574.1)	4.9(573.6)	4.7(573.8)
3-6A	579.9	9.2(570.7)	8.2(571.7)	8.6(571.3)	8.2(571.7)
3-6B	580.2	9.8(570.4)	8.6(571.6)	9.6(570.6)	8.6(571.6)
3-7	597.0	19.8(577.2)	18.9(578.1)	19.8(577.2)	19.5(577.5)
3-7A	596.9	19.2(577.7)	18.6(578.3)	14.7(582.2)	19.7(577.2)
3-8	592.5	15.4(577.1)	14.2(578.3)	12.1(580.4)	14.4(578.1)
3-8A	582.5	12.2(570.3)	11.0(571.5)	19.0(563.5)	12.1(570.4)
3-9	581.3	12.6(568.7)	11.5(569.8)	12.4(568.9)	11.9(569.4)
3-9A	581.0	12.5(568.4)	11.6(569.4)	12.5(568.5)	12.5(568.5)
POND LEVEL		(624.2)			

*Values in parenthesis are feet relative to mean sea level.

TOC = Top of casing elevation in feet relative to mean sea level.

PLANT THREE
CONCENTRATION OF 42 DISSOLVED OXYGEN PPM

SAMPLING POINT DESIGNATION	TRIPS 12881	22381	32381	71482
BACKGROUND WELLS				
3-4 (ALL.)			1.5	
3-4A (FILL)			1.4	
3-4B (RES./ROCK)			1.5	2.1
DP-1				3
DP-2				2.9
DP-8				2.8
DP-9				3.2
RETIRED ASH POND				
3-1 (ASH,ALL.,RES.)			1	2
ACTIVE ASH POND WELLS				
3-2 (ALL.)			0.2	0.3
3-2 (ALL.) DIS. SOL.				
3-2A (ASH)			0.7	0.25
3-3 (RES.)			1.5	2.25
ASH POND LIQUORS				
3-2 (16-18 FT)				
3-2 (20-22 FT)				
3-2 (24-26 FT)				
3-2 (38-40 FT)				
3-2A (24.5-26.4 FT)				
3-3 (10-12 FT)				
3-3 (22-24 FT)				
3-3 (24-26 FT)				
DOWNGRADIENT WELLS (RES.)				
3-5			1.9	1.5
3-6			1.6	2
3-6C				
3-7A			1.3	1.5
3-8			0.7	0.3
3-9				3.7
3-9A			0.6	0.8
DOWNGRADIENT (ALL.)				
3-6A			2.9	2.2
DOWNGRADIENT (FILL)				
3-6B			0.8	0.8
3-8A			0.6	2.9
DOWNGRADIENT (DIKE)				
3-7			0.4	0.7
TOE DRAINS				
3-10			8.2	2.45
3-11				2.1
3-12				5.7
ASH POND DISCHARGE				
3-13				6.1

F 544	11 18 81	UNIT 4 BOILER	BROMATE CLEANING SOL/DEEPBLUE
F 545	11 18 81	UNIT 4 BOILER	BR03 1ST RNSE(CLR)(ICAP-COMP 545-6)
F 546	11 18 81	UNIT 4 BOILER	BROMATE SECOND RINSE/CLEAR

			544	545	546
7	SILVER	PPM	0.252	0.015	CM
8	ALUMINUM	PPM	<0.01	<0.01	CM
9	BORON	PPM	0.045	0.028	CM
10	BARIUM	PPM	0.008	0.009	CM
11	BERYLLIUM	PPM	0.0008	<0.0005	CM
12	CALCIUM	PPM	1.14	3.77	CM
13	CADMIUM	PPM	0.05	<0.01	CM
14	COBALT	PPM	0.23	0.14	CM
15	CHROMIUM	PPM	0.02	0.01	CM
16	COPPER	PPM	1330	0.748	CM
17	IRON	PPM	<0.01	0.01	CM
18	POTASSIUM	PPM	5	4	CM
19	MAGNESIUM	PPM	1.27	1.16	CM
20	MANGANESE	PPM	<0.01	<0.01	CM
21	MOLYBDENUM	PPM	0.4	<0.3	CM
22	SODIUM	PPM	256	29	CM
23	NICKEL	PPM	0.54	<0.05	CM
24	PHOSPHORUS	PPM	811	<0.6	CM
25	LEAD	PPM	<0.05	<0.05	CM
26	SILICON	PPM	<0.05	0.81	CM
27	STRONTIUM	PPM	<0.001	0.019	CM
28	THORIUM	PPM	0.13	0.08	CM
29	TITANIUM	PPM	0.005	<0.005	CM
30	VANADIUM	PPM	0.048	0.022	CM
31	ZINC	PPM	46	<0.05	CM
32	ZIRCONIUM	PPM	<0.05	<0.05	CM
37	PH LAB	-	10.8	10.4	10.1
57	BROMATE	PMM	900	26	<6

F 548	11 18 81	UNIT 4 BOILER	HCL CLEAN.SOL/LT.GREEN W/PURP.SOL
F 549	11 18 81	UNIT 4 BOILER	HCL 1ST RINSE/CLEAR W/GRAY SOL
F 550	11 18 81	UNIT 4 BOILER	HCL 2ND RINSE/YEL/GREEN W/GRAY SOL

			548	549	550
7	SILVER	PPM	<0.005	<0.005	<0.005
8	ALUMINUM	PPM	12.5	0.72	<0.01
9	BORON	PPM	<0.004	<0.004	<0.004
10	BARIUM	PPM	0.121	0.017	0.008
11	BERYLLIUM	PPM	0.0009	<0.0005	<0.0005
12	CALCIUM	PPM	12.5	6.1	5.61
13	CADMIUM	PPM	0.75	0.09	0.04
14	COBALT	PPM	9.89	0.46	<0.05
15	CHROMIUM	PPM	0.42	0.03	<0.01
16	COPPER	PPM	425	10.5	0.505
17	IRON	PPM	5440	967	404
18	POTASSIUM	PPM	<1	4	2
19	MAGNESIUM	PPM	5	1.69	1.47
20	MANGANESE	PPM	46.5	5.38	2.1
21	MOLYBDENUM	PPM	<0.3	<0.3	<0.3
22	SODIUM	PPM	15	28	23
23	NICKEL	PPM	379	57.9	6.25
24	PHOSPHORUS	PPM	<0.6	6.9	0.9
25	LEAD	PPM	2.6	<0.05	<0.05
26	SILICON	PPM	70	2.28	1.03
27	STRONTIUM	PPM	0.074	0.033	0.044
28	THORIUM	PPM	<0.01	0.04	<0.01
29	TITANIUM	PPM	0.744	0.073	<0.005
30	VANADIUM	PPM	0.321	0.067	<0.005
31	ZINC	PPM	417	32.6	2.48
32	ZIRCONIUM	PPM	0.08	<0.05	<0.05
37	PH LAB	-	1.3	1.8	3.7
57	BROMATE	PMM			

F 552	11 18 81	UNIT 4 BOILER	NEUT.SOL/CLEAR W/GRAY SOL
F 553	11 18 81	UNIT 4 BOILER	NEUT. RNSE 1ST (ICAP-COMP 553-5)
F 554	11 18 81	UNIT 4 BOILER	NEUT.2ND RINSE/CLEAR W/GRAY SOL
F 555	11 18 81	UNIT BOILER	NEUT.3RD RINSE/CLEAR W/GRAY SOL

			552	553	554	555
7	SILVER	PPM	<0.005	<0.005	CM	CM
8	ALUMINUM	PPM	0.03	<0.01	CM	CM
9	BORON	PPM	0.027	0.044	CM	CM
10	BARIUM	PPM	<0.005	<0.005	CM	CM
11	BERYLLIUM	PPM	<0.0005	<0.0005	CM	CM
12	CALCIUM	PPM	0.13	3.19	CM	CM
13	CADMIUM	PPM	<0.01	<0.01	CM	CM
14	COBALT	PPM	<0.05	<0.05	CM	CM
15	CHROMIUM	PPM	<0.01	<0.01	CM	CM
16	COPPER	PPM	2.67	0.01	CM	CM
17	IRON	PPM	<0.01	<0.01	CM	CM
18	POTASSIUM	PPM	<1	3	CM	CM
19	MAGNESIUM	PPM	0.02	0.95	CM	CM
20	MANGANESE	PPM	<0.01	<0.01	CM	CM
21	MOLYBDENUM	PPM	0.6	<0.3	CM	CM
22	SODIUM	PPM	4020	69	CM	CM
23	NICKEL	PPM	<0.05	<0.05	CM	CM
24	PHOSPHORUS	PPM	<0.6	<0.6	CM	CM
25	LEAD	PPM	<0.05	<0.05	CM	CM
26	SILICON	PPM	<0.05	0.9	CM	CM
27	STRONTIUM	PPM	0.002	0.019	CM	CM
28	THORIUM	PPM	<0.01	<0.01	CM	CM
29	TITANIUM	PPM	<0.005	<0.005	CM	CM
30	VANADIUM	PPM	<0.005	0.005	CM	CM
31	ZINC	PPM	0.05	<0.05	CM	CM
32	ZIRCONIUM	PPM	<0.05	<0.05	CM	CM
37	PH LAB	-	10.9	10.4	9.9	9.7
57	BROMATE	PMM				

F558 11 18 81 UNIT 4 BOILER SLUICE WATER

558

7	SILVER	PPM	<0.005
8	ALUMINUM	PPM	<0.01
9	BORON	PPM	0.157
10	BARIUM	PPM	0.139
11	BERYLLIUM	PPM	<0.0005
12	CALCIUM	PPM	19.5
13	CADMIUM	PPM	<0.01
14	COBALT	PPM	<0.05
15	CHROMIUM	PPM	<0.01
16	COPPER	PPM	<0.008
17	IRON	PPM	<0.01
18	POTASSIUM	PPM	7
19	MAGNESIUM	PPM	2.81
20	MANGANESE	PPM	0.05
21	MOLYBDENUM	PPM	<0.3
22	SODIUM	PPM	18
23	NICKEL	PPM	0.05
24	PHOSPHORUS	PPM	<0.6
25	LEAD	PPM	<0.05
26	SILICON	PPM	2.68
27	STRONTIUM	PPM	0.306
28	THORIUM	PPM	<0.01
29	TITANIUM	PPM	<0.005
30	VANADIUM	PPM	0.014
31	ZINC	PPM	0.07
32	ZIRCONIUM	PPM	<0.05
37	PH LAB	-	7.3
57	BROMATE	PMM	

PLANT THREE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	9001
3-2 (20.-20.2 FT)	9002
3-2 (38.-40. FT)	9005
3-2 (47.-47.5 FT)	9036
3-3 (10.-12. FT)	9009
3-3 (24.-26. FT)	9012
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	9037
3-2 (48.5-50. FT,ALLUV,SS)	9038
3-2 (50.-51. FT,ALLUV,SS)	9039
3-2 (51.-52. FT,ALLUV,SS)	9040
3-2 (52.-54. FT,ALLUV,SS)	9041
3-3 (28.-30. FT,POSSIBLE FILL,SS)	9049
3-3 (30.-32. FT,RESIDUAL,SS)	9047
3-3 (32.-34. FT,RESIDUAL,SS)	9048
3-3 (34.-34.5 FT,RESIDUAL,SH)	9022
3-3 (37.5-39.5 FT,RESIDUAL,SH)	9024
3-3 (39.5-41.5 FT,RESIDUAL,SH)	9025
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	9013
3-4 (18.5-20.5 FT,ALLUV)	9051
3-4 (20.5-22.5 FT, WEATH. BEDROC)	9014
3-4A (8.-10.5 FT,FILL)	9015
3-4B (16.0-18.0 FT,RESIDUAL)	9026
3-4B (18.5-20.5 FT,WEATH. BEDROC)	9053

PLANT THREE
SOLID CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	<0.05
3-2 (20.-20.2 FT)	<0.05
3-2 (38.-40. FT)	<0.05
3-2 (47.-47.5 FT)	<0.05
3-3 (10.-12. FT)	<0.05
3-3 (24.-26. FT)	<0.05
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	<0.05
3-2 (48.5-50. FT,ALLUV,SS)	<0.05
3-2 (50.-51. FT,ALLUV,SS)	<0.05
3-2 (51.-52. FT,ALLUV,SS)	<0.05
3-2 (52.-54. FT,ALLUV,SS)	<0.05
3-3 (28.-30. FT,POSSIBLE FILL,SS)	<0.05
3-3 (30.-32. FT,RESIDUAL,SS)	<0.05
3-3 (32.-34. FT,RESIDUAL,SS)	<0.05
3-3 (34.-34.5 FT,RESIDUAL,SH)	<0.05
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<0.05
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<0.05
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	<0.05
3-4 (18.5-20.5 FT,ALLUV)	<0.05
3-4 (20.5-22.5 FT, WEATH. BEDROC)	<0.05
3-4A (8.-10.5 FT,FILL)	<0.05
3-4B (16.0-18.0 FT,RESIDUAL)	<0.05
3-4B (18.5-20.5 FT,WEATH. BEDROC)	<0.05

PLANT THREE
SOLID CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	16395
3-2 (20.-20.2 FT)	15913
3-2 (38.-40. FT)	9980
3-2 (47.-47.5 FT)	21485
3-3 (10.-12. FT)	21024
3-3 (24.-26. FT)	8436
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	22064
3-2 (48.5-50. FT,ALLUV,SS)	21077
3-2 (50.-51. FT,ALLUV,SS)	5373
3-2 (51.-52. FT,ALLUV,SS)	12793
3-2 (52.-54. FT,ALLUV,SS)	23536
3-3 (28.-30. FT,POSSIBLE FILL,SS)	27100
3-3 (30.-32. FT,RESIDUAL,SS)	3301
3-3 (32.-34. FT,RESIDUAL,SS)	24389
3-3 (34.-34.5 FT,RESIDUAL,SH)	31893
3-3 (37.5-39.5 FT,RESIDUAL,SH)	30762
3-3 (39.5-41.5 FT,RESIDUAL,SH)	34490
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	3205
3-4 (18.5-20.5 FT,ALLUV)	21432
3-4 (20.5-22.5 FT, WEATH. BEDROC)	16259
3-4A (8.-10.5 FT,FILL)	25343
3-4B (16.0-18.0 FT,RESIDUAL)	18935
3-4B (18.5-20.5 FT,WEATH. BEDROC)	18492

PLANT THREE
SOLID CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	322
3-2 (20.-20.2 FT)	221
3-2 (38.-40. FT)	260
3-2 (47.-47.5 FT)	300
3-3 (10.-12. FT)	358
3-3 (24.-26. FT)	229
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	131
3-2 (48.5-50. FT,ALLUV,SS)	116
3-2 (50.-51. FT,ALLUV,SS)	37
3-2 (51.-52. FT,ALLUV,SS)	321
3-2 (52.-54. FT,ALLUV,SS)	229
3-3 (28.-30. FT,POSSIBLE FILL,SS)	128
3-3 (30.-32. FT,RESIDUAL,SS)	153
3-3 (32.-34. FT,RESIDUAL,SS)	169
3-3 (34.-34.5 FT,RESIDUAL,SH)	133
3-3 (37.5-39.5 FT,RESIDUAL,SH)	160
3-3 (39.5-41.5 FT,RESIDUAL,SH)	171
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	134
3-4 (18.5-20.5 FT,ALLUV)	92
3-4 (20.5-22.5 FT, WEATH. BEDROC)	82
3-4A (8.-10.5 FT,FILL)	62
3-4B (16.0-18.0 FT,RESIDUAL)	107
3-4B (18.5-20.5 FT,WEATH. BEDROC)	1083

PLANT THREE
SOLID CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	1.39
3-2 (20.-20.2 FT)	1.95
3-2 (38.-40. FT)	1.49
3-2 (47.-47.5 FT)	1.71
3-3 (10.-12. FT)	2.37
3-3 (24.-26. FT)	1.07
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	0.71
3-2 (48.5-50. FT,ALLUV,SS)	0.68
3-2 (50.-51. FT,ALLUV,SS)	0.24
3-2 (51.-52. FT,ALLUV,SS)	0.81
3-2 (52.-54. FT,ALLUV,SS)	1.1
3-3 (28.-30. FT,POSSIBLE FILL,SS)	0.72
3-3 (30.-32. FT,RESIDUAL,SS)	0.66
3-3 (32.-34. FT,RESIDUAL,SS)	0.51
3-3 (34.-34.5 FT,RESIDUAL,SH)	0.72
3-3 (37.5-39.5 FT,RESIDUAL,SH)	0.42
3-3 (39.5-41.5 FT,RESIDUAL,SH)	0.64
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	0.64
3-4 (18.5-20.5 FT,ALLUV)	0.51
3-4 (20.5-22.5 FT, WEATH. BEDROC)	0.37
3-4A (8.-10.5 FT,FILL)	0.69
3-4B (16.0-18.0 FT,RESIDUAL)	0.35
3-4B (18.5-20.5 FT,WEATH. BEDROC)	0.79

PLANT THREE
SOLID CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	4578
3-2 (20.-20.2 FT)	4183
3-2 (38.-40. FT)	2340
3-2 (47.-47.5 FT)	2289
3-3 (10.-12. FT)	2612
3-3 (24.-26. FT)	2251
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	483
3-2 (48.5-50. FT,ALLUV,SS)	329
3-2 (50.-51. FT,ALLUV,SS)	193
3-2 (51.-52. FT,ALLUV,SS)	278
3-2 (52.-54. FT,ALLUV,SS)	681
3-3 (28.-30. FT,POSSIBLE FILL,SS)	459
3-3 (30.-32. FT,RESIDUAL,SS)	227
3-3 (32.-34. FT,RESIDUAL,SS)	98
3-3 (34.-34.5 FT,RESIDUAL,SH)	178
3-3 (37.5-39.5 FT,RESIDUAL,SH)	139
3-3 (39.5-41.5 FT,RESIDUAL,SH)	306
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	1025
3-4 (18.5-20.5 FT,ALLUV)	1226
3-4 (20.5-22.5 FT, WEATH. BEDROC)	2634
3-4A (8.-10.5 FT,FILL)	471
3-4B (16.0-18.0 FT,RESIDUAL)	4056
3-4B (18.5-20.5 FT,WEATH. BEDROC)	4056

PLANT THREE
SOLID CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	<0.08
3-2 (20.-20.2 FT)	<0.08
3-2 (38.-40. FT)	<0.08
3-2 (47.-47.5 FT)	<0.08
3-3 (10.-12. FT)	<0.08
3-3 (24.-26. FT)	<0.08
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	<0.08
3-2 (48.5-50. FT,ALLUV,SS)	<0.08
3-2 (50.-51. FT,ALLUV,SS)	<0.08
3-2 (51.-52. FT,ALLUV,SS)	<0.08
3-2 (52.-54. FT,ALLUV,SS)	<0.07
3-3 (28.-30. FT,POSSIBLE FILL,SS)	<0.08
3-3 (30.-32. FT,RESIDUAL,SS)	<0.08
3-3 (32.-34. FT,RESIDUAL,SS)	<0.08
3-3 (34.-34.5 FT,RESIDUAL,SH)	<0.08
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<0.08
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<0.08
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	<0.08
3-4 (18.5-20.5 FT,ALLUV)	<0.08
3-4 (20.5-22.5 FT, WEATH. BEDROC)	<0.08
3-4A (8.-10.5 FT,FILL)	<0.08
3-4B (16.0-18.0 FT,RESIDUAL)	<0.08
3-4B (18.5-20.5 FT,WEATH. BEDROC)	<0.08

PLANT THREE
SOLID CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	<0.5
3-2 (20.-20.2 FT)	<0.5
3-2 (38.-40. FT)	<0.5
3-2 (47.-47.5 FT)	<0.5
3-3 (10.-12. FT)	<0.5
3-3 (24.-26. FT)	<0.5
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	<0.5
3-2 (48.5-50. FT,ALLUV,SS)	<0.5
3-2 (50.-51. FT,ALLUV,SS)	<0.5
3-2 (51.-52. FT,ALLUV,SS)	<0.5
3-2 (52.-54. FT,ALLUV,SS)	<0.5
3-3 (28.-30. FT,POSSIBLE FILL,SS)	<0.5
3-3 (30.-32. FT,RESIDUAL,SS)	<0.5
3-3 (32.-34. FT,RESIDUAL,SS)	<0.5
3-3 (34.-34.5 FT,RESIDUAL,SH)	<0.5
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<0.5
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<0.5
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	<0.5
3-4 (18.5-20.5 FT,ALLUV)	<0.5
3-4 (20.5-22.5 FT, WEATH. BEDROC)	<0.5
3-4A (8.-10.5 FT,FILL)	<0.5
3-4B (16.0-18.0 FT,RESIDUAL)	<0.5
3-4B (18.5-20.5 FT,WEATH. BEDROC)	<0.5

PLANT THREE
SOLID CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	<0.08
3-2 (20.-20.2 FT)	16
3-2 (38.-40. FT)	8.74
3-2 (47.-47.5 FT)	0.64
3-3 (10.-12. FT)	17.35
3-3 (24.-26. FT)	<0.08
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	<0.08
3-2 (48.5-50. FT,ALLUV,SS)	<0.08
3-2 (50.-51. FT,ALLUV,SS)	1.14
3-2 (51.-52. FT,ALLUV,SS)	<0.08
3-2 (52.-54. FT,ALLUV,SS)	<0.08
3-3 (28.-30. FT,POSSIBLE FILL,SS)	<0.08
3-3 (30.-32. FT,RESIDUAL,SS)	<0.08
3-3 (32.-34. FT,RESIDUAL,SS)	<0.08
3-3 (34.-34.5 FT,RESIDUAL,SH)	<0.08
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<0.08
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<0.08
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	4.01
3-4 (18.5-20.5 FT,ALLUV)	<0.08
3-4 (20.5-22.5 FT, WEATH. BEDROC)	<0.08
3-4A (8.-10.5 FT,FILL)	<0.08
3-4B (16.0-18.0 FT,RESIDUAL)	<0.08
3-4B (18.5-20.5 FT,WEATH. BEDROC)	<0.08

PLANT THREE
SOLID CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	40.9
3-2 (20.-20.2 FT)	39.6
3-2 (38.-40. FT)	28.3
3-2 (47.-47.5 FT)	27.5
3-3 (10.-12. FT)	45.1
3-3 (24.-26. FT)	20.8
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	13.4
3-2 (48.5-50. FT,ALLUV,SS)	12.2
3-2 (50.-51. FT,ALLUV,SS)	4.75
3-2 (51.-52. FT,ALLUV,SS)	12.2
3-2 (52.-54. FT,ALLUV,SS)	14.1
3-3 (28.-30. FT,POSSIBLE FILL,SS)	14.4
3-3 (30.-32. FT,RESIDUAL,SS)	18.3
3-3 (32.-34. FT,RESIDUAL,SS)	29.5
3-3 (34.-34.5 FT,RESIDUAL,SH)	29.9
3-3 (37.5-39.5 FT,RESIDUAL,SH)	11.5
3-3 (39.5-41.5 FT,RESIDUAL,SH)	10.4
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	17
3-4 (18.5-20.5 FT,ALLUV)	12.2
3-4 (20.5-22.5 FT, WEATH. BEDROC)	17.6
3-4A (8.-10.5 FT,FILL)	16.9
3-4B (16.0-18.0 FT,RESIDUAL)	15.3
3-4B (18.5-20.5 FT,WEATH. BEDROC)	9.52

PLANT THREE
SOLID CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	29491
3-2 (20.-20.2 FT)	15012
3-2 (38.-40. FT)	11700
3-2 (47.-47.5 FT)	23092
3-3 (10.-12. FT)	18370
3-3 (24.-26. FT)	17131
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	23398
3-2 (48.5-50. FT,ALLUV,SS)	18544
3-2 (50.-51. FT,ALLUV,SS)	11563
3-2 (51.-52. FT,ALLUV,SS)	19489
3-2 (52.-54. FT,ALLUV,SS)	35402
3-3 (28.-30. FT,POSSIBLE FILL,SS)	20500
3-3 (30.-32. FT,RESIDUAL,SS)	25659
3-3 (32.-34. FT,RESIDUAL,SS)	23789
3-3 (34.-34.5 FT,RESIDUAL,SH)	22524
3-3 (37.5-39.5 FT,RESIDUAL,SH)	23071
3-3 (39.5-41.5 FT,RESIDUAL,SH)	24422
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	12344
3-4 (18.5-20.5 FT,ALLUV)	11164
3-4 (20.5-22.5 FT, WEATH. BEDROC)	16558
3-4A (8.-10.5 FT,FILL)	24441
3-4B (16.0-18.0 FT,RESIDUAL)	19533
3-4B (18.5-20.5 FT,WEATH. BEDROC)	21673

PLANT THREE
SOLID CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	AP
3-2 (20.-20.2 FT)	AP
3-2 (38.-40. FT)	AP
3-2 (47.-47.5 FT)	AP
3-3 (10.-12. FT)	AP
3-3 (24.-26. FT)	AP
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	AP
3-2 (48.5-50. FT,ALLUV,SS)	AP
3-2 (50.-51. FT,ALLUV,SS)	AP
3-2 (51.-52. FT,ALLUV,SS)	AP
3-2 (52.-54. FT,ALLUV,SS)	AP
3-3 (28.-30. FT,POSSIBLE FILL,SS)	AP
3-3 (30.-32. FT,RESIDUAL,SS)	AP
3-3 (32.-34. FT,RESIDUAL,SS)	AP
3-3 (34.-34.5 FT,RESIDUAL,SH)	AP
3-3 (37.5-39.5 FT,RESIDUAL,SH)	AP
3-3 (39.5-41.5 FT,RESIDUAL,SH)	AP
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	AP
3-4 (18.5-20.5 FT,ALLUV)	AP
3-4 (20.5-22.5 FT, WEATH. BEDROC)	AP
3-4A (8.-10.5 FT,FILL)	AP
3-4B (16.0-18.0 FT,RESIDUAL)	AP
3-4B (18.5-20.5 FT,WEATH. BEDROC)	AP

PLANT THREE
SOLID CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	1579
3-2 (20.-20.2 FT)	1441
3-2 (38.-40. FT)	882
3-2 (47.-47.5 FT)	1365
3-3 (10.-12. FT)	1500
3-3 (24.-26. FT)	768
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	660
3-2 (48.5-50. FT,ALLUV,SS)	674
3-2 (50.-51. FT,ALLUV,SS)	181
3-2 (51.-52. FT,ALLUV,SS)	575
3-2 (52.-54. FT,ALLUV,SS)	1500
3-3 (28.-30. FT,POSSIBLE FILL,SS)	3250
3-3 (30.-32. FT,RESIDUAL,SS)	5092
3-3 (32.-34. FT,RESIDUAL,SS)	5507
3-3 (34.-34.5 FT,RESIDUAL,SH)	4624
3-3 (37.5-39.5 FT,RESIDUAL,SH)	5253
3-3 (39.5-41.5 FT,RESIDUAL,SH)	5930
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	2737
3-4 (18.5-20.5 FT,ALLUV)	2392
3-4 (20.5-22.5 FT, WEATH. BEDROC)	3162
3-4A (8.-10.5 FT,FILL)	856
3-4B (16.0-18.0 FT,RESIDUAL)	5481
3-4B (18.5-20.5 FT,WEATH. BEDROC)	5587

PLANT THREE
SOLID CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	171
3-2 (20.-20.2 FT)	84.3
3-2 (38.-40. FT)	69.2
3-2 (47.-47.5 FT)	144
3-3 (10.-12. FT)	83.1
3-3 (24.-26. FT)	84
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	1364
3-2 (48.5-50. FT,ALLUV,SS)	557
3-2 (50.-51. FT,ALLUV,SS)	189
3-2 (51.-52. FT,ALLUV,SS)	6086
3-2 (52.-54. FT,ALLUV,SS)	1726
3-3 (28.-30. FT,POSSIBLE FILL,SS)	512
3-3 (30.-32. FT,RESIDUAL,SS)	621
3-3 (32.-34. FT,RESIDUAL,SS)	551
3-3 (34.-34.5 FT,RESIDUAL,SH)	451
3-3 (37.5-39.5 FT,RESIDUAL,SH)	727
3-3 (39.5-41.5 FT,RESIDUAL,SH)	698
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	155
3-4 (18.5-20.5 FT,ALLUV)	303
3-4 (20.5-22.5 FT, WEATH. BEDROC)	181
3-4A (8.-10.5 FT,FILL)	791
3-4B (16.0-18.0 FT,RESIDUAL)	497
3-4B (18.5-20.5 FT,WEATH. BEDROC)	482

PLANT THREE
SOLID CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	<3
3-2 (20.-20.2 FT)	<3
3-2 (38.-40. FT)	<3
3-2 (47.-47.5 FT)	<3
3-3 (10.-12. FT)	<3
3-3 (24.-26. FT)	<3
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	<3
3-2 (48.5-50. FT,ALLUV,SS)	<3
3-2 (50.-51. FT,ALLUV,SS)	<3
3-2 (51.-52. FT,ALLUV,SS)	<3
3-2 (52.-54. FT,ALLUV,SS)	<3
3-3 (28.-30. FT,POSSIBLE FILL,SS)	<3
3-3 (30.-32. FT,RESIDUAL,SS)	<3
3-3 (32.-34. FT,RESIDUAL,SS)	<3
3-3 (34.-34.5 FT,RESIDUAL,SH)	<3
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<3
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<3
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	<3
3-4 (18.5-20.5 FT,ALLUV)	<3
3-4 (20.5-22.5 FT, WEATH. BEDROC)	<3
3-4A (8.-10.5 FT,FILL)	<3
3-4B (16.0-18.0 FT,RESIDUAL)	<3
3-4B (18.5-20.5 FT,WEATH. BEDROC)	<3

PLANT THREE
SOLID CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	379
3-2 (20.-20.2 FT)	430
3-2 (38.-40. FT)	230
3-2 (47.-47.5 FT)	341
3-3 (10.-12. FT)	479
3-3 (24.-26. FT)	209
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	30.8
3-2 (48.5-50. FT,ALLUV,SS)	30.4
3-2 (50.-51. FT,ALLUV,SS)	19.9
3-2 (51.-52. FT,ALLUV,SS)	20
3-2 (52.-54. FT,ALLUV,SS)	29.4
3-3 (28.-30. FT,POSSIBLE FILL,SS)	40
3-3 (30.-32. FT,RESIDUAL,SS)	29.8
3-3 (32.-34. FT,RESIDUAL,SS)	20
3-3 (34.-34.5 FT,RESIDUAL,SH)	29.9
3-3 (37.5-39.5 FT,RESIDUAL,SH)	20
3-3 (39.5-41.5 FT,RESIDUAL,SH)	29.9
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	89
3-4 (18.5-20.5 FT,ALLUV)	69.8
3-4 (20.5-22.5 FT, WEATH. BEDROC)	89.8
3-4A (8.-10.5 FT,FILL)	20
3-4B (16.0-18.0 FT,RESIDUAL)	89.7
3-4B (18.5-20.5 FT,WEATH. BEDROC)	99.4

PLANT THREE
SOLID CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	26
3-2 (20.-20.2 FT)	17.7
3-2 (38.-40. FT)	15.3
3-2 (47.-47.5 FT)	20.1
3-3 (10.-12. FT)	23.6
3-3 (24.-26. FT)	16.8
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	6.36
3-2 (48.5-50. FT,ALLUV,SS)	6.99
3-2 (50.-51. FT,ALLUV,SS)	2.69
3-2 (51.-52. FT,ALLUV,SS)	8.29
3-2 (52.-54. FT,ALLUV,SS)	7.75
3-3 (28.-30. FT,POSSIBLE FILL,SS)	6.6
3-3 (30.-32. FT,RESIDUAL,SS)	7.86
3-3 (32.-34. FT,RESIDUAL,SS)	3.1
3-3 (34.-34.5 FT,RESIDUAL,SH)	4.68
3-3 (37.5-39.5 FT,RESIDUAL,SH)	3.6
3-3 (39.5-41.5 FT,RESIDUAL,SH)	3.89
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	10.8
3-4 (18.5-20.5 FT,ALLUV)	6.08
3-4 (20.5-22.5 FT, WEATH. BEDROC)	10
3-4A (8.-10.5 FT,FILL)	8.01
3-4B (16.0-18.0 FT,RESIDUAL)	4.48
3-4B (18.5-20.5 FT,WEATH. BEDROC)	7.16

PLANT THREE
SOLID CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	179
3-2 (20.-20.2 FT)	156
3-2 (38.-40. FT)	120
3-2 (47.-47.5 FT)	94.8
3-3 (10.-12. FT)	156
3-3 (24.-26. FT)	123
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	82.1
3-2 (48.5-50. FT,ALLUV,SS)	96.2
3-2 (50.-51. FT,ALLUV,SS)	10.9
3-2 (51.-52. FT,ALLUV,SS)	69.9
3-2 (52.-54. FT,ALLUV,SS)	275
3-3 (28.-30. FT,POSSIBLE FILL,SS)	108
3-3 (30.-32. FT,RESIDUAL,SS)	53.7
3-3 (32.-34. FT,RESIDUAL,SS)	<6
3-3 (34.-34.5 FT,RESIDUAL,SH)	<6
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<6
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<6
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	<6
3-4 (18.5-20.5 FT,ALLUV)	<6
3-4 (20.5-22.5 FT, WEATH. BEDROC)	209
3-4A (8.-10.5 FT,FILL)	23
3-4B (16.0-18.0 FT,RESIDUAL)	382
3-4B (18.5-20.5 FT,WEATH. BEDROC)	401

PLANT THREE
SOLID CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	8
3-2 (20.-20.2 FT)	12.01
3-2 (38.-40. FT)	6.19
3-2 (47.-47.5 FT)	4.62
3-3 (10.-12. FT)	10.21
3-3 (24.-26. FT)	3.19
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	5.54
3-2 (48.5-50. FT,ALLUV,SS)	6.08
3-2 (50.-51. FT,ALLUV,SS)	0.99
3-2 (51.-52. FT,ALLUV,SS)	6
3-2 (52.-54. FT,ALLUV,SS)	4.71
3-3 (28.-30. FT,POSSIBLE FILL,SS)	3.8
3-3 (30.-32. FT,RESIDUAL,SS)	3.78
3-3 (32.-34. FT,RESIDUAL,SS)	3.2
3-3 (34.-34.5 FT,RESIDUAL,SH)	2.59
3-3 (37.5-39.5 FT,RESIDUAL,SH)	3.8
3-3 (39.5-41.5 FT,RESIDUAL,SH)	3.99
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	3.38
3-4 (18.5-20.5 FT,ALLUV)	4.59
3-4 (20.5-22.5 FT, WEATH. BEDROC)	0.79
3-4A (8.-10.5 FT,FILL)	6.81
3-4B (16.0-18.0 FT,RESIDUAL)	1.4
3-4B (18.5-20.5 FT,WEATH. BEDROC)	1.19

PLANT THREE
SOLID CONCENTRATION OF 26 SILICON* PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	22.5
3-2 (20.-20.2 FT)	17.5
3-2 (38.-40. FT)	7.09
3-2 (47.-47.5 FT)	<0.5
3-3 (10.-12. FT)	6.94
3-3 (24.-26. FT)	<0.5
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	26.5
3-2 (48.5-50. FT,ALLUV,SS)	13.71
3-2 (50.-51. FT,ALLUV,SS)	5.58
3-2 (51.-52. FT,ALLUV,SS)	7.9
3-2 (52.-54. FT,ALLUV,SS)	8.43
3-3 (28.-30. FT,POSSIBLE FILL,SS)	9.7
3-3 (30.-32. FT,RESIDUAL,SS)	2.18
3-3 (32.-34. FT,RESIDUAL,SS)	<0.5
3-3 (34.-34.5 FT,RESIDUAL,SH)	3.59
3-3 (37.5-39.5 FT,RESIDUAL,SH)	<0.5
3-3 (39.5-41.5 FT,RESIDUAL,SH)	<0.5
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	2.89
3-4 (18.5-20.5 FT,ALLUV)	3.29
3-4 (20.5-22.5 FT, WEATH. BEDROC)	<0.5
3-4A (8.-10.5 FT,FILL)	13.62
3-4B (16.0-18.0 FT,RESIDUAL)	<0.5
3-4B (18.5-20.5 FT,WEATH. BEDROC)	<0.5

*(partial digestion)

PLANT THREE
SOLID CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	189
3-2 (20.-20.2 FT)	213
3-2 (38.-40. FT)	140
3-2 (47.-47.5 FT)	160
3-3 (10.-12. FT)	239
3-3 (24.-26. FT)	112
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	13
3-2 (48.5-50. FT,ALLUV,SS)	8.71
3-2 (50.-51. FT,ALLUV,SS)	11.2
3-2 (51.-52. FT,ALLUV,SS)	11.2
3-2 (52.-54. FT,ALLUV,SS)	12.6
3-3 (28.-30. FT,POSSIBLE FILL,SS)	18.5
3-3 (30.-32. FT,RESIDUAL,SS)	9.89
3-3 (32.-34. FT,RESIDUAL,SS)	7.01
3-3 (34.-34.5 FT,RESIDUAL,SH)	9.35
3-3 (37.5-39.5 FT,RESIDUAL,SH)	5.36
3-3 (39.5-41.5 FT,RESIDUAL,SH)	8.89
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	19.1
3-4 (18.5-20.5 FT,ALLUV)	16.1
3-4 (20.5-22.5 FT, WEATH. BEDROC)	29.3
3-4A (8.-10.5 FT,FILL)	8.85
3-4B (16.0-18.0 FT,RESIDUAL)	31.9
3-4B (18.5-20.5 FT,WEATH. BEDROC)	33.1

PLANT THREE
SOLID CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	<0.1
3-2 (20.-20.2 FT)	4.9
3-2 (38.-40. FT)	3.59
3-2 (47.-47.5 FT)	4.42
3-3 (10.-12. FT)	4.89
3-3 (24.-26. FT)	2.39
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	6.36
3-2 (48.5-50. FT,ALLUV,SS)	8.11
3-2 (50.-51. FT,ALLUV,SS)	1.4
3-2 (51.-52. FT,ALLUV,SS)	11.4
3-2 (52.-54. FT,ALLUV,SS)	7.06
3-3 (28.-30. FT,POSSIBLE FILL,SS)	7.8
3-3 (30.-32. FT,RESIDUAL,SS)	7.06
3-3 (32.-34. FT,RESIDUAL,SS)	5.1
3-3 (34.-34.5 FT,RESIDUAL,SH)	5.28
3-3 (37.5-39.5 FT,RESIDUAL,SH)	7.29
3-3 (39.5-41.5 FT,RESIDUAL,SH)	5.98
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	2.88
3-4 (18.5-20.5 FT,ALLUV)	4.59
3-4 (20.5-22.5 FT, WEATH. BEDROC)	3.89
3-4A (8.-10.5 FT,FILL)	6.11
3-4B (16.0-18.0 FT,RESIDUAL)	2.69
3-4B (18.5-20.5 FT,WEATH. BEDROC)	2.9

PLANT THREE
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	566
3-2 (20.-20.2 FT)	555
3-2 (38.-40. FT)	364
3-2 (47.-47.5 FT)	654
3-3 (10.-12. FT)	687
3-3 (24.-26. FT)	364
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	322
3-2 (48.5-50. FT,ALLUV,SS)	321
3-2 (50.-51. FT,ALLUV,SS)	320
3-2 (51.-52. FT,ALLUV,SS)	354
3-2 (52.-54. FT,ALLUV,SS)	475
3-3 (28.-30. FT,POSSIBLE FILL,SS)	615
3-3 (30.-32. FT,RESIDUAL,SS)	739
3-3 (32.-34. FT,RESIDUAL,SS)	635
3-3 (34.-34.5 FT,RESIDUAL,SH)	699
3-3 (37.5-39.5 FT,RESIDUAL,SH)	638
3-3 (39.5-41.5 FT,RESIDUAL,SH)	687
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	356
3-4 (18.5-20.5 FT,ALLUV)	479
3-4 (20.5-22.5 FT, WEATH. BEDROC)	791
3-4A (8.-10.5 FT,FILL)	446
3-4B (16.0-18.0 FT,RESIDUAL)	1335
3-4B (18.5-20.5 FT,WEATH. BEDROC)	1352

PLANT THREE
SOLID CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	34.9
3-2 (20.-20.2 FT)	33.5
3-2 (38.-40. FT)	28.8
3-2 (47.-47.5 FT)	35.2
3-3 (10.-12. FT)	41.5
3-3 (24.-26. FT)	22.2
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	37.2
3-2 (48.5-50. FT,ALLUV,SS)	34.3
3-2 (50.-51. FT,ALLUV,SS)	24.3
3-2 (51.-52. FT,ALLUV,SS)	38.8
3-2 (52.-54. FT,ALLUV,SS)	48.8
3-3 (28.-30. FT,POSSIBLE FILL,SS)	50.9
3-3 (30.-32. FT,RESIDUAL,SS)	51.3
3-3 (32.-34. FT,RESIDUAL,SS)	38.1
3-3 (34.-34.5 FT,RESIDUAL,SH)	31.6
3-3 (37.5-39.5 FT,RESIDUAL,SH)	28.3
3-3 (39.5-41.5 FT,RESIDUAL,SH)	35.7
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	39.5
3-4 (18.5-20.5 FT,ALLUV)	28.1
3-4 (20.5-22.5 FT, WEATH. BEDROC)	39.8
3-4A (8.-10.5 FT,FILL)	49.1
3-4B (16.0-18.0 FT,RESIDUAL)	36.5
3-4B (18.5-20.5 FT,WEATH. BEDROC)	42.2

PLANT THREE
SOLID CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS 12881
ASH SAMPLES	
3-2 (16.-18. FT)	45.7
3-2 (20.-20.2 FT)	32.9
3-2 (38.-40. FT)	15.1
3-2 (47.-47.5 FT)	18.5
3-3 (10.-12. FT)	29.2
3-3 (24.-26. FT)	20.8
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	21.4
3-2 (48.5-50. FT,ALLUV,SS)	23.5
3-2 (50.-51. FT,ALLUV,SS)	7.28
3-2 (51.-52. FT,ALLUV,SS)	25.7
3-2 (52.-54. FT,ALLUV,SS)	27.9
3-3 (28.-30. FT,POSSIBLE FILL,SS)	30.3
3-3 (30.-32. FT,RESIDUAL,SS)	40
3-3 (32.-34. FT,RESIDUAL,SS)	36.1
3-3 (34.-34.5 FT,RESIDUAL,SH)	28.1
3-3 (37.5-39.5 FT,RESIDUAL,SH)	32.6
3-3 (39.5-41.5 FT,RESIDUAL,SH)	41
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	36.2
3-4 (18.5-20.5 FT,ALLUV)	32.1
3-4 (20.5-22.5 FT, WEATH. BEDROC)	22.8
3-4A (8.-10.5 FT,FILL)	24.4
3-4B (16.0-18.0 FT,RESIDUAL)	33.7
3-4B (18.5-20.5 FT,WEATH. BEDROC)	33.2

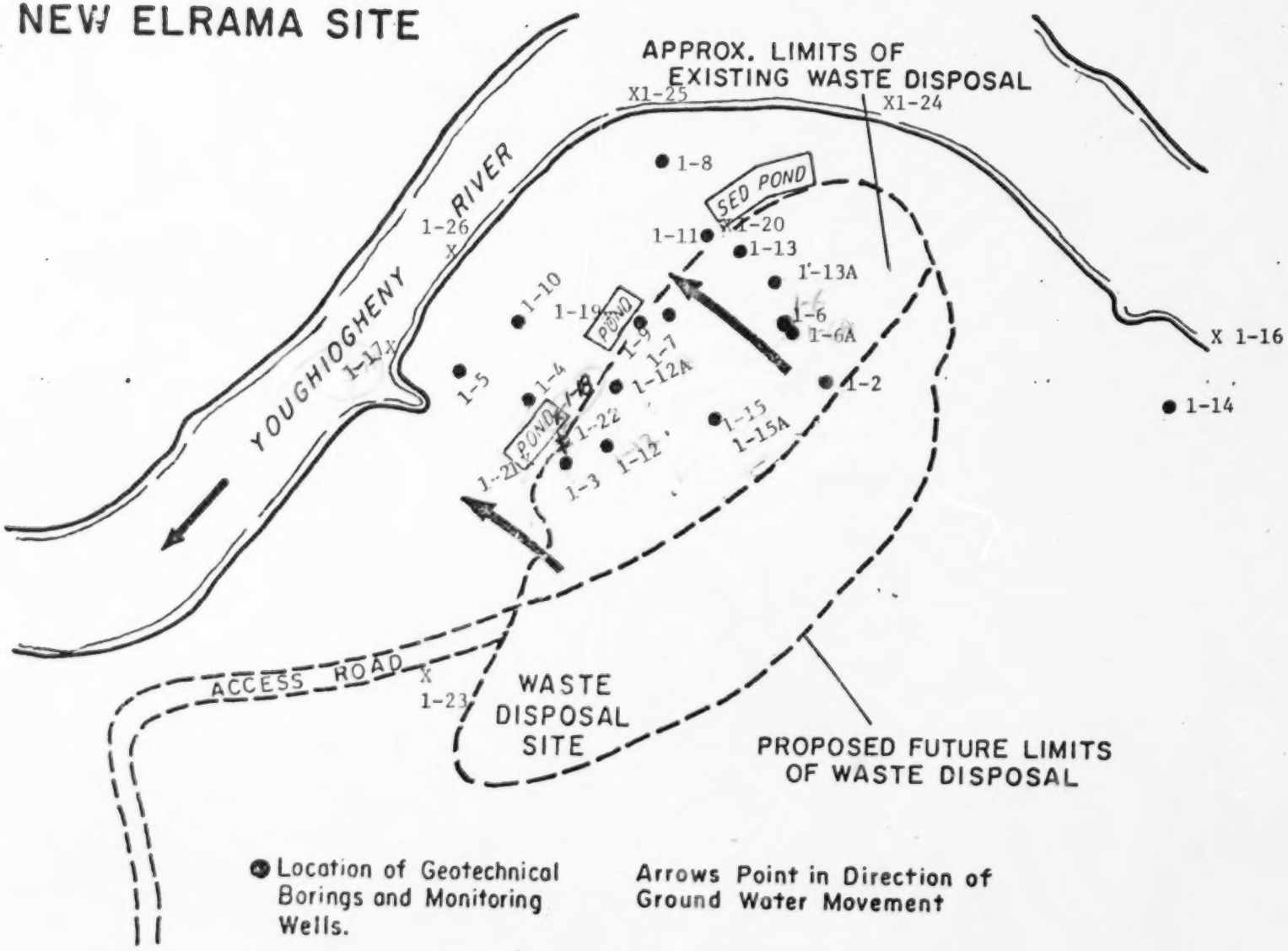
PLANT THREE
SOLID CONCENTRATION OF 32 ZIRCONIUM PPM

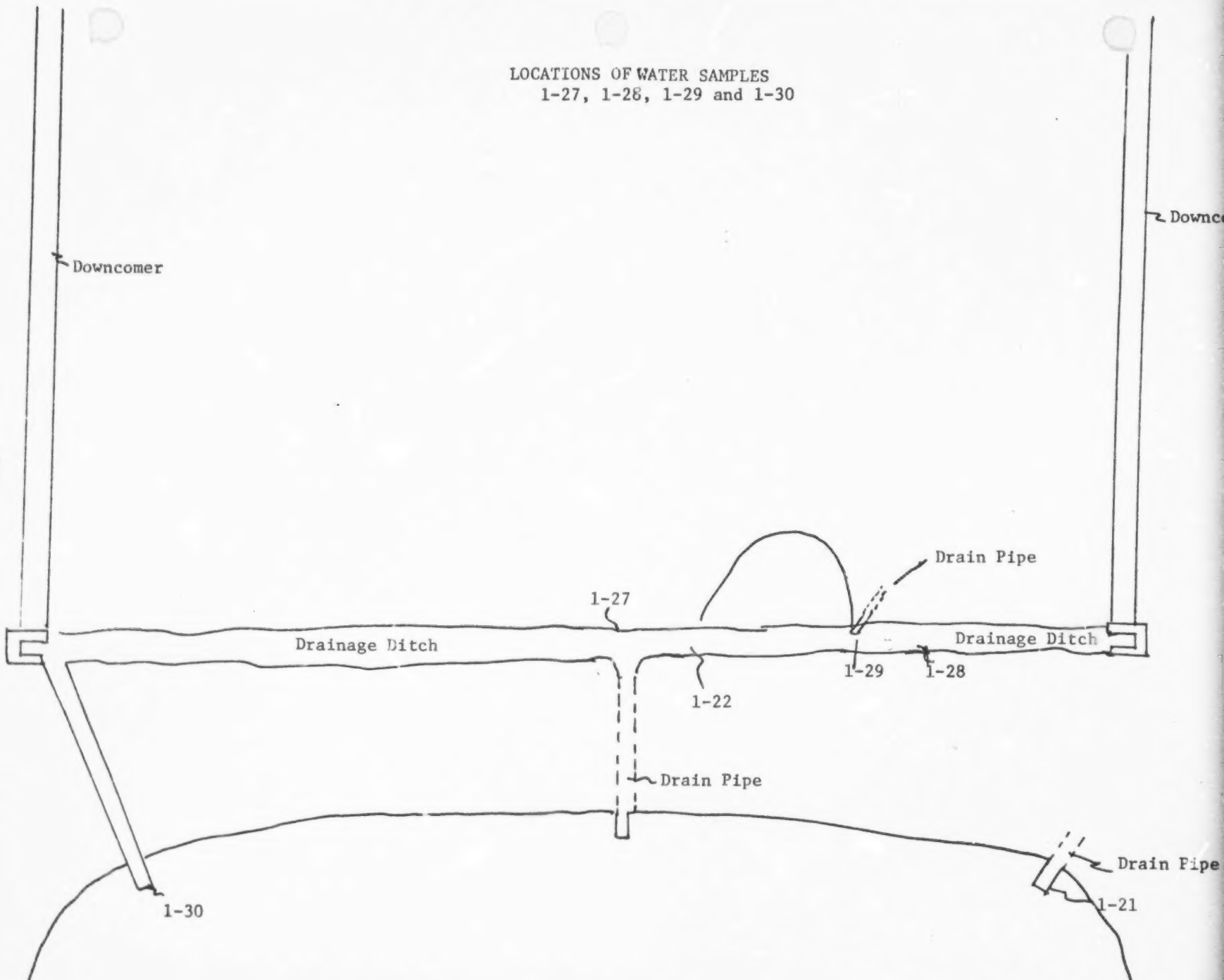
SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	11.3
3-2 (20.-20.2 FT)	11
3-2 (38.-40. FT)	5.14
3-2 (47.-47.5 FT)	4.16
3-3 (10.-12. FT)	7.83
3-3 (24.-26. FT)	8.03
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	9.16
3-2 (48.5-50. FT,ALLUV,SS)	12
3-2 (50.-51. FT,ALLUV,SS)	2.36
3-2 (51.-52. FT,ALLUV,SS)	11.9
3-2 (52.-54. FT,ALLUV,SS)	8.91
3-3 (28.-30. FT,POSSIBLE FILL,SS)	3.86
3-3 (30.-32. FT,RESIDUAL,SS)	4.14
3-3 (32.-34. FT,RESIDUAL,SS)	3.96
3-3 (34.-34.5 FT,RESIDUAL,SH)	3.77
3-3 (37.5-39.5 FT,RESIDUAL,SH)	4.22
3-3 (39.5-41.5 FT,RESIDUAL,SH)	4.23
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	2.97
3-4 (18.5-20.5 FT,ALLUV)	2.98
3-4 (20.5-22.5 FT, WEATH. BEDROC)	2.55
3-4A (8.-10.5 FT,FILL)	7.14
3-4B (16.0-18.0 FT,RESIDUAL)	2.73
3-4B (18.5-20.5 FT,WEATH. BEDROC)	3.02

PLANT THREE
SOLID CONCENTRATION OF 43 ARSENIC (SOLID) PPM

SAMPLING POINT DESIGNATION	TRIPS
	12881
ASH SAMPLES	
3-2 (16.-18. FT)	32.7
3-2 (20.-20.2 FT)	38
3-2 (38.-40. FT)	36.1
3-2 (47.-47.5 FT)	19.5
3-3 (10.-12. FT)	57.1
3-3 (24.-26. FT)	16.2
SOILS UNDER ASH	
3-2 (47.5-48.5 FT,ALLUV,SS)	2.87
3-2 (48.5-50. FT,ALLUV,SS)	1.3
3-2 (50.-51. FT,ALLUV,SS)	1.71
3-2 (51.-52. FT,ALLUV,SS)	1.07
3-2 (52.-54. FT,ALLUV,SS)	3.33
3-3 (28.-30. FT,POSSIBLE FILL,SS)	3.4
3-3 (30.-32. FT,RESIDUAL,SS)	1.37
3-3 (32.-34. FT,RESIDUAL,SS)	0.25
3-3 (34.-34.5 FT,RESIDUAL,SH)	1.26
3-3 (37.5-39.5 FT,RESIDUAL,SH)	0.25
3-3 (39.5-41.5 FT,RESIDUAL,SH)	0.3
BACKGROUND SOILS	
3-4 (16.-18.5 FT,ALLUV)	0.06
3-4 (18.5-20.5 FT,ALLUV)	0.27
3-4 (20.5-22.5 FT, WEATH. BEDROC)	0.61
3-4A (8.-10.5 FT,FILL)	1.41
3-4B (16.0-18.0 FT,RESIDUAL)	0.41
3-4B (18.5-20.5 FT,WEATH. BEDROC)	0.48

Elrama


NEW ELRAMA SITE
APPROX. LIMITS OF EXISTING WASTE DISPOSAL
X1-25
X1-24
YOUGHIOGHENY RIVER
1-26
1-17
1-8
SED POND
1-11
1-20
1-13
1-13A
1-10
1-19
POND
1-9
1-7
1-6
1-6A
1-5
1-4
1-12A
1-2
X 1-16
1-14
POND
1-22
1-15
1-15A
1-21
1-3
1-12
ACCESS ROAD
1-23
WASTE DISPOSAL SITE
PROPOSED FUTURE LIMITS OF WASTE DISPOSAL
Location of Geotechnical Borings and Monitoring Wells.
Arrows Point in Direction of Ground Water Movement
X Surface Water Sample Locations
See attached


LOCATIONS OF WATER SAMPLES
1-27, 1-28, 1-29 and 1-30
Downcomer
Downc
Drain Pipe
1-27
Drainage Ditch
Drainage Ditch
1-29
1-28
1-22
Drain Pipe
Drain Pipe
1-21
1-30

PLANT ONE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	221	255	298	494
1-23 (HIGHWALL SEEP)		259	328	524
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	241	276	318	507
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	152			
1-6 (52 FT)	150			
1-6 (55 FT)	151			
1-6A (52 FT.,POZ-O-TEC)	140			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	166			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	237	274	311	506
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		275	312	520
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		263	303	517
1-12 (WELL,BENCH A,SAND UNDER WASTE)	236	270	308	505
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		273	310	519
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	222	256	299	495
1-15 (BENCH D,PIEZOMETER IN SHALE)	242	<282		
1-15A (STRIP SPOIL UNDER WASTE)		282	319	508
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		269	307	<501
1-8 (29 FT,SAND)	229			
1-8 (40 FT,SAND)	132	264	304	501
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	246	265	305	502
1-10 (36 FT,SAND,RES. SOILS)	135			
1-10 (37 FT,SAND,RES. SOILS)	231	268	306	503
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	139			
1-4 (28 FT,SANDY SILT AND SAND)	223			
1-4 (41 FT,SANDY SILT AND SAND)	129	257	300	498
1-5 (SANDY SILT AND SAND)	224	262	302	499
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		289	324	511
1-21 (POND 3,INFLUENT,C-C SECTION)	148	293	336	522
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				535
1-19 (POND 2,MIDDLE,B-B SECTION)		291		514
1-20 (POND 1,EAST,A-A SECTION)		292	326	515

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		294	338	523
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				528
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				529
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				530
RIVER WATERS				
1-16 (BASELINE)		287	321	509
1-17 (DOWNGRADIENT)		288	323	510
1-24 (DOWNGRADIENT)			330	
1-25 (DOWNGRADIENT)			332	516
1-26 (DOWNGRADIENT)			335	

(< Numbers are negative)

PLANT ONE
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.7	0.24	0.52	<0.3
1-23 (HIGHWALL SEEP)		0.29	0.29	<0.3
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	0.2	<0.1	0.55	<0.3
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.2			
1-6 (52 FT)	<0.2			
1-6 (55 FT)	<0.2			
1-6A (52 FT.,POZ-O-TEC)	<0.2			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	3	<0.1	0.23	<0.3
1-13 (BENCH A,RES. SOIL UNDER WASTE)		<0.1	1.3	<0.3
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)				
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.1	AP	<0.3
1-12 (WELL,BENCH A,SAND UNDER WASTE)	0.3	0.55	0.56	<0.3
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.1	3.1	<0.3
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	1	0.5	0.5	<0.3
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.3			
1-15A (STRIP SPOIL UNDER WASTE)		<0.1	0.55	<0.3
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		0.22	0.27	SP
1-8 (29 FT,SAND)	0.1	<0.1	0.16	<0.3
1-8 (40 FT,SAND)				
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.1	0.14	1.6	<0.3
1-10 (36 FT,SAND,RES. SOILS)	0.2			
1-10 (37 FT,SAND,RES. SOILS)	0.2	0.16	0.21	<0.3
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.7			
1-4 (28 FT,SANDY SILT AND SAND)	0.5			
1-4 (41 FT,SANDY SILT AND SAND)	0.5	0.42	0.52	<0.3
1-5 (SANDY SILT AND SAND)	0.1	0.33	0.1	<0.3
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.1	1.8	<0.3
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.2	<0.1	0.91	<0.3
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.3
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.1		<0.3
1-20 (POND 1,EAST,A-A SECTION)		<0.1	1.7	<0.3

1 Fluoride

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.1	0.52	<0.3
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.3
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.3
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.3
RIVER WATERS				
1-16 (BASELINE)		<0.1	0.1	<0.3
1-17 (DOWNGRADIENT)		<0.1	0.1	<0.3
1-24 (DOWNGRADIENT)			0.14	
1-25 (DOWNGRADIENT)			0.14	<0.3
1-26 (DOWNGRADIENT)			0.14	

PLANT ONE
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	99	62	44	27
1-23 (HIGHWALL SEEP)		3.2	3.1	23
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	4	4	3.2	2.5
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	460			
1-6 (52 FT)	460			
1-6 (55 FT)	471			
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	538			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	28	22	26	84
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		501	524	458
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		AP	570	508
1-12 (WELL,BENCH A,SAND UNDER WASTE)	67	26	14.5	8
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		521	531	403
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	99		176	210
1-15 (BENCH D,PIEZOMETER IN SHALE)	17			
1-15A (STRIP SPOIL UNDER WASTE)		23	14.7	14
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		18	31	SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)	23	17	28	36
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	22	22	27	32
1-10 (36 FT,SAND,RES. SOILS)	5			
1-10 (37 FT,SAND,RES. SOILS)	5	4.1	4.8	5
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	4			
1-4 (28 FT,SANDY SILT AND SAND)	15			
1-4 (41 FT,SANDY SILT AND SAND)	19	25	35	55
1-5 (SANDY SILT AND SAND)	17	12.6	13.2	17
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		92	114	51
1-21 (POND 3,INFLUENT,C-C SECTION)	68	86	97	84
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				46
1-19 (POND 2,MIDDLE,B-B SECTION)		23		28
1-20 (POND 1,EAST,A-A SECTION)		25	33	14

2 Chloride

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		139	166	154
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				508
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				106
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				188
RIVER WATERS				
1-16 (BASELINE)		10	8.7	8
1-17 (DOWNGRADIENT)		10	8.7	35
1-24 (DOWNGRADIENT)			8.8	
1-25 (DOWNGRADIENT)			9	8
1-26 (DOWNGRADIENT)			9	

PLANT ONE
CONCENTRATION OF 3 NITRATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	SP	<0.5	<0.5	<2
1-23 (HIGHWALL SEEP)		17.3	0.37	<2
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	3	11.2	13.4	4
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<2			
1-6 (52 FT)	<2			
1-6 (55 FT)	<2			
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<2			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	2	0.5	<0.5	<2
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.5	<0.5	<2
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		5.3	<0.5	<2
1-12 (WELL,BENCH A,SAND UNDER WASTE)	SP	3.5	5.1	<2
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.5	<0.5	<2
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	4	<0.5	<0.5	<2
1-15 (BENCH D,PIEZOMETER IN SHALE)	<2			
1-15A (STRIP SPOIL UNDER WASTE)		<0.5	<0.5	<2
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		2	2.6	
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)	<2	4.8	6.2	<2
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	1.5	3.5	2.6	<2
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	2	<0.5	<0.5	<2
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	2			
1-4 (28 FT,SANDY SILT AND SAND)	2			
1-4 (41 FT,SANDY SILT AND SAND)	<2	3	3.7	<2
1-5 (SANDY SILT AND SAND)	<2	3	2	<2
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.5	<0.5	<2
1-21 (POND 3,INFLUENT,C-C SECTION)	<2	<0.5	<0.5	<2
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<2
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.5		<2
1-20 (POND 1,EAST,A-A SECTION)		0.8	<0.5	<2

3 Nitrate

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.5	<0.5	<2
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<2
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<2
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<2
RIVER WATERS				
1-16 (BASELINE)		5.6	3.7	4
1-17 (DOWNGRADIENT)		4.5	3.8	4
1-24 (DOWNGRADIENT)			4	
1-25 (DOWNGRADIENT)			3.9	4
1-26 (DOWNGRADIENT)			4	

PLANT ONE
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	1994	1130	1950	2330
1-23 (HIGHWALL SEEP)		41	48.1	166
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	367	339	343	202
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	1850			
1-6 (52 FT)	1850			
1-6 (55 FT)	1820			
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	700			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	1013	346	384	463
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		1816	1800	1776
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		1130	1180	1239
1-12 (WELL,BENCH A,SAND UNDER WASTE)	677	650	837	690
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		1945	1720	1239
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	2020	1230	1270	1142
1-15 (BENCH D,PIEZOMETER IN SHALE)	549			
1-15A (STRIP SPOIL UNDER WASTE)		941	1500	1121
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		78	115	SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)	115	85	160	320
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	1116	1240	1370	1875
1-10 (36 FT,SAND,RES. SOILS)	AP			
1-10 (37 FT,SAND,RES. SOILS)	54	53	64.2	147
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	621			
1-4 (28 FT,SANDY SILT AND SAND)	136			
1-4 (41 FT,SANDY SILT AND SAND)	AP	829	930	1163
1-5 (SANDY SILT AND SAND)	495	457	487	617
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		1027	1170	763
1-21 (POND 3,INFLUENT,C-C SECTION)	1180	1285	1312	1142
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				257
1-19 (POND 2,MIDDLE,B-B SECTION)		646		500
1-20 (POND 1,EAST,A-A SECTION)		740	998	797

4 Sulfate

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		1257	1480	1026
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				1410
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				1307
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				886
RIVER WATERS				
1-16 (BASELINE)		56	65.6	69
1-17 (DOWNGRADIENT)		56	63.4	81
1-24 (DOWNGRADIENT)			65.7	
1-25 (DOWNGRADIENT)			67.8	88
1-26 (DOWNGRADIENT)			66	

PLANT ONE
CONCENTRATION OF 5 PHOSPHATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		<4	<4	<4
1-23 (HIGHWALL SEEP)				<4
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		<4	<4	<4
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)				
1-6 (52 FT)				
1-6 (55 FT)				
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL				
1-13 (BENCH A,RES. SOIL UNDER WASTE)		<4	<4	<4
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<4	<4	<4
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<4	<4	<4
1-12 (WELL,BENCH A,SAND UNDER WASTE)		<4	<4	<4
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<4	<4	<4
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<4	<4	<4
1-15 (BENCH D,PIEZOMETER IN SHALE)				
1-15A (STRIP SPOIL UNDER WASTE)		<4	<4	<4
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<4	<4	SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)		<4	<4	<4
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		<4	<4	<4
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)		<4	<4	<4
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)		<4	<4	<4
1-5 (SANDY SILT AND SAND)		<4	<4	<4
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<4	<4	<4
1-21 (POND 3,INFLUENT,C-C SECTION)		<4	<4	<4
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<4
1-19 (POND 2,MIDDLE,B-B SECTION)		<4		<4
1-20 (POND 1,EAST,A-A SECTION)		<4	<4	<4

5 Phosphate

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<4	<4	<4
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<4
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<4
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<4
RIVER WATERS				
1-16 (BASELINE)		<4	<4	<4
1-17 (DOWNGRADIENT)		<4	<4	<4
1-24 (DOWNGRADIENT)			<4	
1-25 (DOWNGRADIENT)			<4	<4
1-26 (DOWNGRADIENT)			<4	

PLANT ONE
CONCENTRATION OF 6 BROMIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	2	<1	<1	<5
1-23 (HIGHWALL SEEP)			<1	<5
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		<1	<1	<5
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	6			
1-6 (52 FT)	7			
1-6 (55 FT)	6			
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	7			
1-13 (BENCH A,RES. SOIL UNDER WASTE)		<1	<1	<5
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		9	23	<5
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		9	18	<5
1-12 (WELL,BENCH A,SAND UNDER WASTE)	1	<1	<1	<5
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		12	28	<5
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	2	4	7	<5
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.5			
1-15A (STRIP SPOIL UNDER WASTE)		<1	<1	<5
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<1	<1	SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)		<1	<1	<5
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		<1	1	<5
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)		<1	<1	<5
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)	<0.5	0.7	<1	<5
1-5 (SANDY SILT AND SAND)		<1	<1	<5
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		1	<1	<5
1-21 (POND 3,INFLUENT,C-C SECTION)	1	1	4	<5
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<5
1-19 (POND 2,MIDDLE,B-B SECTION)		<1		<5
1-20 (POND 1,EAST,A-A SECTION)		<1	<1	<5

6 Bromide

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		2	6	<5
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<5
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<5
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<5
RIVER WATERS				
1-16 (BASELINE)		<1	<1	<5
1-17 (DOWNGRADIENT)		<1	<1	<5
1-24 (DOWNGRADIENT)			<1	
1-25 (DOWNGRADIENT)			<1	<5
1-26 (DOWNGRADIENT)			<1	

PLANT ONE
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.005	<0.005	<0.005	<0.005
1-23 (HIGHWALL SEEP)		<0.005	<0.005	<0.005
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.005	<0.005	<0.005	<0.005
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.005			
1-6 (52 FT)	<0.005			
1-6 (55 FT)	<0.005			
1-6A (52 FT.,POZ-O-TEC)	<0.005			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.005			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.005	<0.005	<0.005	<0.005
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.005	<0.005	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.005	<0.005	<0.005
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.005	<0.005	<0.005	<0.005
1-12A (LYSIMETER,BENCH A,WASTE ABOVE CLAY)		<0.005	<0.005	<0.005
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.005	<0.005	<0.005
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.005			
1-15A (STRIP SPOIL UNDER WASTE)		<0.005	<0.005	<0.005
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.005	<0.005	
1-8 (29 FT,SAND)	<0.005			
1-8 (40 FT,SAND)		<0.005	<0.005	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.005	<0.005	<0.005	<0.005
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.005	<0.005	<0.005	<0.005
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.005			
1-4 (28 FT,SANDY SILT AND SAND)	<0.005			
1-4 (41 FT,SANDY SILT AND SAND)		<0.005	<0.005	<0.005
1-5 (SANDY SILT AND SAND)	<0.005	<0.005	<0.005	<0.005
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.005	<0.005	<0.005
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.005	<0.005	<0.005	<0.005
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.005
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.005		<0.005
1-20 (POND 1,EAST,A-A SECTION)		<0.005	<0.005	<0.005

7 Silver

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.005	<0.005	<0.005
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.005
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.005
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.005
RIVER WATERS				
1-16 (BASELINE)		<0.005	<0.005	<0.005
1-17 (DOWNGRADIENT)		<0.005	<0.005	<0.005
1-24 (DOWNGRADIENT)			<0.005	
1-25 (DOWNGRADIENT)			<0.005	0.026
1-26 (DOWNGRADIENT)			<0.005	

PLANT ONE
CONCENTRATION OF 8 ALUMINUM PPM

added 12/1/82

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	1.38	0.25	0.25	0.74
1-23 (HIGHWALL SEEP)		<0.3	<0.3	<0.3
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.05	0.65	0.58	1.2
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.8			
1-6 (52 FT)	0.89			
1-6 (55 FT)	0.76			
1-6A (52 FT.,POZ-O-TEC)	1.24			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	0.92			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	0.57	<0.01	<0.01	<0.01
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.37	0.35	0.63
MIDDLE (3-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.22	0.21	0.22
1-12 (WELL,BENCH A,SAND UNDER WASTE)	0.4	0.17	0.18	<0.01
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		0.45	0.37	0.5
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		0.27	0.2	0.67
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.28			
1-15A (STRIP SPOIL UNDER WASTE)		0.26	0.3	0.29
1-15B (WASTE)		SP	SP	SP
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.01	<0.01	
1-8 (29 FT,SAND)	<0.3			
1-8 (40 FT,SAND)		<0.3	<0.3	0.05
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.46	0.28	0.28	0.71
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.3	<0.3	<0.3	<0.01
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.49			
1-4 (28 FT,SANDY SILT AND SAND)	<0.3			
1-4 (41 FT,SANDY SILT AND SAND)		0.51	0.63	0.8
1-5 (SANDY SILT AND SAND)	0.07	0.03	<0.01	0.25
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		0.22	0.2	0.16
1-21 (POND 3,INFLUENT,C-C SECTION)	0.94	0.2	0.36	0.43
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.39
1-19 (POND 2,MIDDLE,B-B SECTION)		0.18		0.06
1-20 (POND 1,EAST,A-A SECTION)		0.32	0.35	0.32

PLANT ONE
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		0.23	0.44	0.44
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				0.61
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.43
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.43
RIVER WATERS				
1-16 (BASELINE)		<0.3	<0.3	<0.3
1-17 (DOWNGRADIENT)		<0.3	<0.3	<0.3
1-24 (DOWNGRADIENT)			<0.3	
1-25 (DOWNGRADIENT)			<0.3	<0.3
1-26 (DOWNGRADIENT)			<0.3	

(location 15B was dry in all trips, and is only reported on this site report)

PLANT ONE
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.452	0.094	0.362	0.831
1-23 (HIGHWALL SEEP)		0.024	0.038	0.009
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	0.026	0.015	0.027	0.026
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.188			
1-6 (52 FT)	0.339			
1-6 (55 FT)	0.188			
1-6A (52 FT.,POZ-O-TEC)	0.138			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	0.151			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	0.261	0.038	0.045	0.021
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.17	0.187	0.348
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.097	0.097	0.111
1-12 (WELL,BENCH A,SAND UNDER WASTE)	0.209	0.165	0.11	0.08
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		1.23	1.38	2.68
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		0.41	0.396	0.488
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.572			
1-15A (STRIP SPOIL UNDER WASTE)		0.249	0.323	0.485
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		0.018	0.016	SP
1-8 (29 FT,SAND)	<0.005			
1-8 (40 FT,SAND)		0.019	0.016	0.035
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.261	0.193	0.198	0.407
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.005	<0.005	<0.005	<0.004
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.013			
1-4 (28 FT,SANDY SILT AND SAND)	<0.005			
1-4 (41 FT,SANDY SILT AND SAND)		0.071	0.064	0.152
1-5 (SANDY SILT AND SAND)	0.026	0.049	0.038	0.086
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		0.264	0.31	0.294
1-21 (POND 3,INFLUENT,C-C SECTION)	0.163	0.307	0.315	0.314
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.235
1-19 (POND 2,MIDDLE,B-B SECTION)		0.271		0.254
1-20 (POND 1,EAST,A-A SECTION)		0.216	0.302	0.312

9 Boron

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		0.312	0.454	0.335
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				0.902
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.392
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.326
RIVER WATERS				
1-16 (BASELINE)		0.011	0.015	0.021
1-17 (DOWNGRADIENT)		0.009	0.015	0.027
1-24 (DOWNGRADIENT)			0.011	
1-25 (DOWNGRADIENT)			0.022	0.047
1-26 (DOWNGRADIENT)			0.021	

PLANT ONE
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.085	<0.005	<0.005	<0.005
1-23 (HIGHWALL SEEP)		0.058	0.054	0.039
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	0.067	0.017	0.013	0.013
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.085			
1-6 (52 FT)	0.134			
1-6 (55 FT)	0.097			
1-6A (52 FT.,POZ-O-TEC)	0.109			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	0.109			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	0.189	0.068	0.081	0.045
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.042	0.032	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.078	0.075	0.043
1-12 (WELL,BENCH A,SAND UNDER WASTE)	0.122	0.058	0.042	0.018
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		0.02	<0.005	<0.005
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		0.016	0.016	<0.005
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.278			
1-15A (STRIP SPOIL UNDER WASTE)		0.133	0.005	0.018
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		0.071	0.059	SP
1-8 (29 FT,SAND)	0.011			
1-8 (40 FT,SAND)		0.046	0.083	0.039
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.033	<0.005	<0.005	<0.005
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	0.122	0.163	0.165	0.169
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.013			
1-4 (28 FT,SANDY SILT AND SAND)	0.025			
1-4 (41 FT,SANDY SILT AND SAND)		<0.005	<0.005	<0.005
1-5 (SANDY SILT AND SAND)	0.089	0.018	0.017	0.005
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.005	<0.005	0.013
1-21 (POND 3,INFLUENT,C-C SECTION)	0.037	<0.005	<0.005	<0.005
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.005
1-19 (POND 2,MIDDLE,B-B SECTION)		0.014		0.007
1-20 (POND 1,EAST,A-A SECTION)		0.018	0.026	0.005

10 Barium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		0.025	0.033	<0.005
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.005
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.005
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.006
RIVER WATERS				
1-16 (BASELINE)		0.042	0.039	0.04
1-17 (DOWNGRADIENT)		0.041	0.036	0.043
1-24 (DOWNGRADIENT)			0.033	
1-25 (DOWNGRADIENT)			0.039	0.035
1-26 (DOWNGRADIENT)			0.038	

PLANT ONE
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.0008	<0.0005	<0.0005	<0.0005
1-23 (HIGHWALL SEEP)		0.0012	0.0009	<0.0005
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.0005	0.0022	0.002	0.0033
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.0007			
1-6 (52 FT)	0.0011			
1-6 (55 FT)	<0.0005			
1-6A (52 FT.,POZ-O-TEC)	<0.0005			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.0005			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.0005	<0.0005	<0.0005	<0.0005
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.0005	<0.0005	<0.0005
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)	<0.0005	<0.0005	<0.0005	<0.0005
1-12 (WELL,BENCH A,SAND UNDER WASTE)		<0.0005	<0.0005	<0.0005
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.0005	<0.0005	<0.0005
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)	<0.0005	<0.0005	<0.0005	<0.0005
1-15 (BENCH D,PIEZOMETER IN SHALE)		<0.0005	<0.0005	<0.0005
1-15A (STRIP SPOIL UNDER WASTE)				
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)	<0.0005	<0.0005	<0.0005	SP
1-8 (29 FT,SAND)		<0.0005	<0.0005	<0.0005
1-8 (40 FT,SAND)				
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.0005	<0.0005	<0.0005	<0.0005
1-10 (36 FT,SAND,RES. SOILS)	<0.0005	<0.0005	<0.0005	<0.0005
1-10 (37 FT,SAND,RES. SOILS)				
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.0005			
1-4 (28 FT,SANDY SILT AND SAND)	<0.0005	<0.0005	<0.0005	<0.0005
1-4 (41 FT,SANDY SILT AND SAND)	<0.0005	<0.0005	<0.0005	<0.0005
1-5 (SANDY SILT AND SAND)				
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)	<0.0005	<0.0005	<0.0005	<0.0005
1-21 (POND 3,INFLUENT,C-C SECTION)		<0.0005	<0.0005	<0.0005
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.0005
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.0005		<0.0005
1-20 (POND 1,EAST,A-A SECTION)		<0.0005	<0.0005	<0.0005

11 Beryllium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.0005	<0.0005	<0.0005
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.0005
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.0005
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.0005
RIVER WATERS				
1-16 (BASELINE)		<0.0005	<0.0005	<0.0005
1-17 (DOWNGRADIENT)		<0.0005	<0.0005	0.0006
1-24 (DOWNGRADIENT)			<0.0005	
1-25 (DOWNGRADIENT)			<0.0005	<0.0005
1-26 (DOWNGRADIENT)			<0.0005	

PLANT ONE
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	755	319	605	659
1-23 (HIGHWALL SEEP)		11.7	12.2	15.1
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	129	88.5	87.3	109
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	572			
1-6 (52 FT)	581			
1-6 (55 FT)	566			
1-6A (52 FT.,POZ-O-TEC)	166			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	209			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	413	132	147	178
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		665	640	729
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		335	294	257
1-12 (WELL,BENCH A,SAND UNDER WASTE)	296	265	291	216
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		892	1060	1050
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		498	479	484
1-15 (BENCH D,PIEZOMETER IN SHALE)	271			
1-15A (STRIP SPOIL UNDER WASTE)		436	594	471
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		117	110	SP
1-8 (29 FT,SAND)	52.7			
1-8 (40 FT,SAND)		63.2	62.5	106
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	443	490	472	530
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	84.1	80.3	80.7	107
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	197			
1-4 (28 FT,SANDY SILT AND SAND)	67			
1-4 (41 FT,SANDY SILT AND SAND)		236	232	304
1-5 (SANDY SILT AND SAND)	175	170	141	156
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		354	376	300
1-21 (POND 3,INFLUENT,C-C SECTION)	366	436	424	416
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				379
1-19 (POND 2,MIDDLE,B-B SECTION)		251		199
1-20 (POND 1,EAST,A-A SECTION)		319	411	340

12 Calcium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		475	538	434
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				645
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				419
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				437
RIVER WATERS				
1-16 (BASELINE)		20.2	20.3	30.5
1-17 (DOWNGRADIENT)		19.6	19.9	30.5
1-24 (DOWNGRADIENT)			19.2	
1-25 (DOWNGRADIENT)			20.3	29.1
1-26 (DOWNGRADIENT)			20	

PLANT ONE
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.2	<0.01	<0.01	0.04
1-23 (HIGHWALL SEEP)		<0.01	<0.01	<0.01
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.1	<0.01	<0.01	<0.01
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.2			
1-6 (52 FT)	0.2			
1-6 (55 FT)	0.2			
1-6A (52 FT.,POZ-O-TEC)	<0.1			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.1			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.1	<0.01	<0.01	<0.01
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.01	<0.01	0.02
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.01	<0.01	<0.01
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.1	<0.01	<0.01	<0.01
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.01	<0.01	0.03
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.01	<0.01	0.03
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.1			
1-15A (STRIP SPOIL UNDER WASTE)		<0.01	<0.01	0.02
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.01	<0.01	SP
1-8 (29 FT,SAND)	<0.1			
1-8 (40 FT,SAND)		<0.01	<0.01	<0.01
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.1	<0.01	<0.01	0.04
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.1	<0.01	<0.01	<0.01
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.2			
1-4 (28 FT,SANDY SILT AND SAND)	<0.1			
1-4 (41 FT,SANDY SILT AND SAND)		<0.01	<0.01	0.04
1-5 (SANDY SILT AND SAND)	<0.1	<0.01	<0.01	0.02
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.01	<0.01	0.02
1-21 (POND 3,INFLUENT,C-C SECTION)	0.2	<0.01	<0.01	0.02
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.02
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.01		0.01
1-20 (POND 1,EAST,A-A SECTION)		<0.01	<0.01	0.02

13 Cadmium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.01	<0.01	0.02
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				0.02
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.03
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.03
RIVER WATERS				
1-16 (BASELINE)		<0.01	<0.01	<0.01
1-17 (DOWNGRADIENT)		<0.01	<0.01	<0.01
1-24 (DOWNGRADIENT)			<0.01	
1-25 (DOWNGRADIENT)			<0.01	<0.01
1-26 (DOWNGRADIENT)			<0.01	

PLANT ONE
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.05	0.13	<0.05	0.14
1-23 (HIGHWALL SEEP)		<0.05	<0.05	<0.05
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.05	<0.05	<0.05	<0.05
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.12			
1-6 (52 FT)	<0.05			
1-6 (55 FT)	<0.05			
1-6A (52 FT.,POZ-O-TEC)	<0.05			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.05			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.05	<0.05	<0.05	<0.05
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.05	<0.05	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.05	<0.05	<0.05
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.05	<0.05	<0.05	<0.05
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.05	<0.05	<0.05
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.05			
1-15A (STRIP SPOIL UNDER WASTE)		<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.05	<0.05	SP
1-8 (29 FT,SAND)	<0.05			
1-8 (40 FT,SAND)		<0.05	<0.05	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.05	<0.05	<0.05	0.12
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.05	<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.05			
1-4 (28 FT,SANDY SILT AND SAND)	<0.05			
1-4 (41 FT,SANDY SILT AND SAND)		<0.05	<0.05	0.2
1-5 (SANDY SILT AND SAND)	<0.05	<0.05	<0.05	0.3
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.05	<0.05	<0.05
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.05	<0.05	<0.05	<0.05
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.05
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.05		<0.05
1-20 (POND 1,EAST,A-A SECTION)		<0.05	<0.05	<0.05

14 Cobalt

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.05	<0.05	<0.05
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.05
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.05
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.05
RIVER WATERS				
1-16 (BASELINE)		<0.05	<0.05	<0.05
1-17 (DOWNGRADIENT)		<0.05	<0.05	<0.05
1-24 (DOWNGRADIENT)			<0.05	
1-25 (DOWNGRADIENT)			<0.05	0.06
1-26 (DOWNGRADIENT)			<0.05	

Note: The few positive values (those greater than detection limit) may not be real since three of sixteen blanks had levels ranging from 0.06 to 0.11 ppm.

PLANT ONE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.08	<0.01	<0.01	<0.01
1-23 (HIGHWALL SEEP)		<0.01	<0.01	<0.01
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	0.01	<0.01	<0.01	<0.01
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.02			
1-6 (52 FT)	0.04			
1-6 (55 FT)	<0.01			
1-6A (52 FT.,POZ-O-TEC)	<0.01			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.01			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	0.02	<0.01	<0.01	<0.01
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.01	<0.01	<0.01
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.01	<0.01	<0.01
1-12 (WELL,BENCH A,SAND UNDER WASTE)	0.03	<0.01	<0.01	<0.01
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.01	<0.01	<0.01
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.01	<0.01	<0.01
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.01			
1-15A (STRIP SPOIL UNDER WASTE)		<0.01	<0.01	<0.01
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.01	<0.01	SP
1-8 (29 FT,SAND)	<0.01			
1-8 (40 FT,SAND)		<0.01	<0.01	<0.01
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.02	<0.01	<0.01	<0.01
1-10 (36 FT,SAND,RES. SOILS)	<0.01			
1-10 (37 FT,SAND,RES. SOILS)		<0.01	<0.01	<0.01
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.06			
1-4 (28 FT,SANDY SILT AND SAND)	<0.01			
1-4 (41 FT,SANDY SILT AND SAND)		<0.01	<0.01	<0.01
1-5 (SANDY SILT AND SAND)	0.01	<0.01	<0.01	<0.01
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.01	<0.01	<0.01
1-21 (POND 3,INFLUENT,C-C SECTION)	0.07	<0.01	<0.01	<0.01
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.01
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.01		<0.01
1-20 (POND 1,EAST,A-A SECTION)		<0.01	<0.01	<0.01

15 Chromium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.01	<0.01	<0.01
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.01
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.01
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.01
RIVER WATERS				
1-16 (BASELINE)		<0.01	<0.01	<0.01
1-17 (DOWNGRADIENT)		<0.01	<0.01	<0.01
1-24 (DOWNGRADIENT)			<0.01	
1-25 (DOWNGRADIENT)			<0.01	<0.01
1-26 (DOWNGRADIENT)			<0.01	

PLANT ONE
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.005	<0.008	<0.008	0.012
1-23 (HIGHWALL SEEP)		0.008	<0.008	<0.008
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.005	0.01	<0.008	0.044
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.022			
1-6 (52 FT)	<0.005			
1-6 (55 FT)	<0.005			
1-6A (52 FT.,POZ-O-TEC)	<0.005			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.005			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.005	<0.008	<0.008	<0.008
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.011	<0.008	<0.008
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.013	<0.008	<0.008
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.005	0.017	<0.008	<0.008
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.008	<0.008	<0.008
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.008	<0.008	0.013
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.005			
1-15A (STRIP SPOIL UNDER WASTE)		<0.008	<0.008	<0.008
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.008	<0.008	SP
1-8 (29 FT,SAND)	<0.005			
1-8 (40 FT,SAND)		<0.008	<0.008	<0.008
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.005	0.009	<0.008	0.03
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.005	<0.008	<0.008	<0.008
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.005			
1-4 (28 FT,SANDY SILT AND SAND)	<0.005			
1-4 (41 FT,SANDY SILT AND SAND)		0.017	<0.008	0.023
1-5 (SANDY SILT AND SAND)	<0.005	<0.008	<0.008	0.017
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.008	<0.008	<0.008
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.005	<0.008	<0.008	<0.008
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.01
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.008		<0.008
1-20 (POND 1,EAST,A-A SECTION)		<0.008	<0.008	0.009

16 Copper

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.008	<0.008	<0.008
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.008
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.008
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.009
RIVER WATERS				
1-16 (BASELINE)		<0.008	<0.008	<0.008
1-17 (DOWNGRADIENT)		<0.008	<0.008	<0.008
1-24 (DOWNGRADIENT)			<0.008	
1-25 (DOWNGRADIENT)			<0.008	0.01
1-26 (DOWNGRADIENT)			<0.008	

PLANT ONE
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.01	16.3	66.9	171
1-23 (HIGHWALL SEEP)		0.03	<0.01	<0.01
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	0.04	0.03	<0.01	0.55
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.01			
1-6 (52 FT)	0.05			
1-6 (55 FT)	<0.01			
1-6A (52 FT.,POZ-O-TEC)	<0.01			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.01			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.01	0.02	<0.01	0.01
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.04	0.02	0.07
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.03	<0.01	<0.01
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.01	0.04	0.04	0.19
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		0.07	0.06	0.04
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		60.2	59	66.3
1-15 (BENCH D,PIEZOMETER IN SHALE)	0.71			
1-15A (STRIP SPOIL UNDER WASTE)		3.73	11.5	39.6
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		0.03	0.02	SP
1-8 (29 FT,SAND)	<0.01			
1-8 (40 FT,SAND)		0.01	0.02	0.11
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.01	0.04	0.01	0.17
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.01	0.03	0.02	<0.01
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.01			
1-4 (28 FT,SANDY SILT AND SAND)	<0.01			
1-4 (41 FT,SANDY SILT AND SAND)		0.03	0.01	0.16
1-5 (SANDY SILT AND SAND)	<0.01	0.01	<0.01	0.11
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		0.02	0.02	0.07
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.01	3.02	2.85	0.04
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.05
1-19 (POND 2,MIDDLE,B-B SECTION)		0.02		0.1
1-20 (POND 1,EAST,A-A SECTION)		0.02	0.01	0.15

17 Iron

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		29	19.7	4.26
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				0.05
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.1
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				26.5
RIVER WATERS				
1-16 (BASELINE)		0.02	0.05	0.02
1-17 (DOWNGRADIENT)		<0.01	0.05	0.02
1-24 (DOWNGRADIENT)			0.02	
1-25 (DOWNGRADIENT)			0.05	0.17
1-26 (DOWNGRADIENT)			0.05	

PLANT ONE
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	17	4	6	5
1-23 (HIGHWALL SEEP)		2		<1
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	2	4	3	10
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	543			
1-6 (52 FT)	548			
1-6 (55 FT)	568			
1-6A (52 FT.,POZ-O-TEC)	696			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	589			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	5	1	3	8
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		442	473	603
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		512	524	646
1-12 (WELL,BENCH A,SAND UNDER WASTE)	14	10	10	6
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		105	79	64
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		32	33	52
1-15 (BENCH D,PIEZOMETER IN SHALE)	137			
1-15A (STRIP SPOIL UNDER WASTE)		6	5	16
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		2	2	SP
1-8 (29 FT,SAND)	2			
1-8 (40 FT,SAND)		3	2	<1
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	2	4	4	8
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<1		1	<1
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	2			
1-4 (28 FT,SANDY SILT AND SAND)	<1			
1-4 (41 FT,SANDY SILT AND SAND)		2	2	9
1-5 (SANDY SILT AND SAND)	2	2	2	7
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		45	53	43
1-21 (POND 3,INFLUENT,C-C SECTION)	26	31	24	14
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				17
1-19 (POND 2,MIDDLE,B-B SECTION)		18		1
1-20 (POND 1,EAST,A-A SECTION)		19	21	6

18 Potassium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		35	28	34
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				300
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				13
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				37
RIVER WATERS				
1-16 (BASELINE)		2	2	12
1-17 (DOWNGRADIENT)		2	2	14
1-24 (DOWNGRADIENT)				
1-25 (DOWNGRADIENT)			1	<1
1-26 (DOWNGRADIENT)				

PLANT ONE
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	211	139	166	150
1-23 (HIGHWALL SEEP)		5.43	5.95	7.66
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	43.6	38.1	38.7	42.1
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.78			
1-6 (52 FT)	0.97			
1-6 (55 FT)	0.72			
1-6A (52 FT.,POZ-O-TEC)	0.19			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	0.42			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	65	30.9	32.4	42.6
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		6.51	4.82	2.37
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		5.35	2.52	0.54
1-12 (WELL,BENCH A,SAND UNDER WASTE)	70	54.9	48.8	35.4
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		29.2	17.9	29
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		193	191	186
1-15 (BENCH D,PIEZOMETER IN SHALE)	58.7			
1-15A (STRIP SPOIL UNDER WASTE)		62.3	78.5	58.5
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		17.2	14.1	SP
1-8 (29 FT,SAND)	12.2			
1-8 (40 FT,SAND)		17.4	17.8	30.5
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	68	68.4	71.4	59.9
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	9.76	7.92	7.63	8.01
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	106			
1-4 (28 FT,SANDY SILT AND SAND)	17			
1-4 (41 FT,SANDY SILT AND SAND)		114	112	122
1-5 (SANDY SILT AND SAND)	42.1	45.5	37	33.5
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		84.1	95.8	45
1-21 (POND 3,INFLUENT,C-C SECTION)	170	188	193	210
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				42.8
1-19 (POND 2,MIDDLE,B-B SECTION)		18		17.3
1-20 (POND 1,EAST,A-A SECTION)		11.6	14.1	14.6

19 Magnesium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		188	192	178
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				13.4
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				126
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				168
RIVER WATERS				
1-16 (BASELINE)		6.55	6.45	7.32
1-17 (DOWNGRADIENT)		6.37	6.18	7.46
1-24 (DOWNGRADIENT)			6.11	
1-25 (DOWNGRADIENT)			6.36	7.36
1-26 (DOWNGRADIENT)			6.28	

PLANT ONE
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	30.2	34	32.3	26.8
1-23 (HIGHWALL SEEP)		0.37	0.29	0.02
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	9.85	2.25	2.43	2.68
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.01			
1-6 (52 FT)	0.03			
1-6 (55 FT)	<0.01			
1-6A (52 FT.,POZ-O-TEC)	<0.01			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.01			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	7.59	2.88	4.38	3.14
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.04	0.02	<0.01
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.01	0.01	<0.01
1-12 (WELL,BENCH A,SAND UNDER WASTE)	8.05	6.04	5.74	3.53
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		2.19	0.69	1.23
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		23.3	20.6	18.6
1-15 (BENCH D,PIEZOMETER IN SHALE)	10.4			
1-15A (STRIP SPOIL UNDER WASTE)		12.8	15.4	17.2
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		0.65	0.26	SP
1-8 (29 FT,SAND)	0.55			
1-8 (40 FT,SAND)		1.09	0.24	0.1
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	1.86	2.15	1.15	0.5
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	1.27	1.45	1.42	1.84
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	7.12			
1-4 (28 FT,SANDY SILT AND SAND)	0.52			
1-4 (41 FT,SANDY SILT AND SAND)		1.89	1.49	2.92
1-5 (SANDY SILT AND SAND)	11.3	7.1	15.5	22.8
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		1.35	1.13	0.21
1-21 (POND 3,INFLUENT,C-C SECTION)	9.42	12.9	12.8	14.3
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.33
1-19 (POND 2,MIDDLE,B-B SECTION)		0.02		0.02
1-20 (POND 1,EAST,A-A SECTION)		<0.01	<0.01	<0.01

20 Manganese

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		20.7	17.9	18.1
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				0.06
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				1.28
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				24.6
RIVER WATERS				
1-16 (BASELINE)		0.21	0.12	0.2
1-17 (DOWNGRADIENT)		0.19	0.15	0.37
1-24 (DOWNGRADIENT)			0.12	
1-25 (DOWNGRADIENT)			0.13	0.18
1-26 (DOWNGRADIENT)			0.12	

PLANT ONE
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.4	<0.3	<0.3	<0.3
1-23 (HIGHWALL SEEP)		<0.3	<0.3	<0.3
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.2	<0.3	<0.3	<0.3
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.6			
1-6 (52 FT)	1.3			
1-6 (55 FT)	<0.2			
1-6A (52 FT.,POZ-O-TEC)	1.5			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.2			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.2	<0.3	<0.3	<0.3
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.4	0.3	<0.3
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.3	<0.3	<0.3
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.2	<0.3	<0.3	<0.3
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.3	<0.3	<0.3
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.3	<0.3	<0.3
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.2			
1-15A (STRIP SPOIL UNDER WASTE)		<0.3	<0.3	<0.3
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.3	<0.3	SP
1-8 (29 FT,SAND)	<0.2			
1-8 (40 FT,SAND)		<0.3	<0.3	<0.3
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.2	<0.3	<0.3	<0.3
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.2	<0.3	<0.3	<0.3
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.2			
1-4 (28 FT,SANDY SILT AND SAND)	<0.2			
1-4 (41 FT,SANDY SILT AND SAND)		<0.3	<0.3	0.3
1-5 (SANDY SILT AND SAND)	<0.2	<0.3	<0.3	<0.3
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.3	<0.3	<0.3
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.2	<0.3	<0.3	<0.3
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.3
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.3		<0.3
1-20 (POND 1,EAST,A-A SECTION)		<0.3	<0.3	<0.3

21 Molybdenum

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.3	0.3	<0.3
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.3
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.3
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.3
RIVER WATERS				
1-16 (BASELINE)		<0.3	<0.3	<0.3
1-17 (DOWNGRADIENT)		<0.3	<0.3	<0.3
1-24 (DOWNGRADIENT)			<0.3	
1-25 (DOWNGRADIENT)			<0.3	<0.3
1-26 (DOWNGRADIENT)			<0.3	

PLANT ONE
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	29	19	19	17
1-23 (HIGHWALL SEEP)		2	1	<1
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	7	6	6	6
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	226			
1-6 (52 FT)	226			
1-6 (55 FT)	225			
1-6A (52 FT.,POZ-O-TEC)	190			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	165			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	7	8	8	7
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		222	216	236
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		286	231	222
1-12 (WELL,BENCH A,SAND UNDER WASTE)	25	23	14	7
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		113	98	94
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		54	55	67
1-15 (BENCH D,PIEZOMETER IN SHALE)	52			
1-15A (STRIP SPOIL UNDER WASTE)		32	32	32
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		13	5	SP
1-8 (29 FT,SAND)	11			
1-8 (40 FT,SAND)		5	5	9
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	24	37	29	18
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	4	4	5	2
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	5			
1-4 (28 FT,SANDY SILT AND SAND)	14			
1-4 (41 FT,SANDY SILT AND SAND)		17	15	20
1-5 (SANDY SILT AND SAND)	13	15	11	11
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		35	40	20
1-21 (POND 3,INFLUENT,C-C SECTION)	38	44	42	44
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				11
1-19 (POND 2,MIDDLE,B-B SECTION)		10		7
1-20 (POND 1,EAST,A-A SECTION)		12	13	8

22 Sodium	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		54	52	55
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				147
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				25
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				58
RIVER WATERS				
1-16 (BASELINE)		12	13	17
1-17 (DOWNGRADIENT)		10	13	17
1-24 (DOWNGRADIENT)			12	
1-25 (DOWNGRADIENT)			13	17
1-26 (DOWNGRADIENT)			13	

PLANT ONE
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.05	0.24	0.2	0.45
1-23 (HIGHWALL SEEP)		<0.05	<0.05	<0.05
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.05	0.16	0.19	0.16
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.05			
1-6 (52 FT)	<0.05			
1-6 (55 FT)	<0.05			
1-6A (52 FT.,POZ-O-TEC)	<0.05			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.05			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.05	<0.05	<0.05	<0.05
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.05	<0.05	0.08
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.05	<0.05	<0.05
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.05	<0.05	<0.05	<0.05
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.05	<0.05	0.08
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		0.05	<0.05	0.1
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.05			
1-15A (STRIP SPOIL UNDER WASTE)		0.05	<0.05	0.1
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.05	<0.05	SP
1-8 (29 FT,SAND)	<0.05			
1-8 (40 FT,SAND)		<0.05	<0.05	0.06
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.07	0.1	0.1	0.19
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.05	<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.05			
1-4 (28 FT,SANDY SILT AND SAND)	<0.05			
1-4 (41 FT,SANDY SILT AND SAND)		0.28	0.29	0.37
1-5 (SANDY SILT AND SAND)	0.12	0.12	0.13	0.18
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.05	<0.05	0.06
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.05	0.06	0.05	0.07
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.08
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.05		<0.05
1-20 (POND 1,EAST,A-A SECTION)		<0.05	<0.05	0.09

23 Nickel

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.05	<0.05	0.06
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				0.08
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.11
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.09
RIVER WATERS				
1-16 (BASELINE)		<0.05	<0.05	<0.05
1-17 (DOWNGRADIENT)		<0.05	<0.05	<0.05
1-24 (DOWNGRADIENT)			<0.05	
1-25 (DOWNGRADIENT)			<0.05	<0.05
1-26 (DOWNGRADIENT)			<0.05	

PLANT ONE
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	0.9	<0.6	0.6	1.5
1-23 (HIGHWALL SEEP)		<0.6	<0.6	<0.6
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.5	<0.6	<0.6	0.9
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.5			
1-6 (52 FT)	<0.5			
1-6 (55 FT)	<0.5			
1-6A (52 FT.,POZ-O-TEC)	<0.5			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.5			
1-13 (BENCH A,RES. SOIL UNDER WASTE)		<0.6	<0.6	0.9
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.6	<0.6	0.6
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.6	<0.6	<0.6
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.5	<0.6	<0.6	0.8
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.6	0.6	0.8
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		0.6	0.7	1.5
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.5			
1-15A (STRIP SPOIL UNDER WASTE)		<0.6	<0.6	1.5
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.6	<0.6	SP
1-8 (29 FT,SAND)	<0.5			
1-8 (40 FT,SAND)		<0.6	<0.6	0.7
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.5	<0.6	<0.6	1.6
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.5	<0.6	<0.6	<0.6
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.5			
1-4 (28 FT,SANDY SILT AND SAND)	<0.5			
1-4 (41 FT,SANDY SILT AND SAND)		<0.6	<0.6	1
1-5 (SANDY SILT AND SAND)	<0.5	<0.6	<0.6	0.8
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.6	<0.6	1.5
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.5	<0.6	<0.6	<0.6
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.6
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.6		1.1
1-20 (POND 1,EAST,A-A SECTION)		<0.6	<0.6	1.4

24 Phosphorus

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.6	<0.6	<0.6
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.6
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.7
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.9
RIVER WATERS				
1-16 (BASELINE)		<0.6	<0.6	<0.6
1-17 (DOWNGRADIENT)		<0.6	<0.6	0.9
1-24 (DOWNGRADIENT)			<0.6	
1-25 (DOWNGRADIENT)			<0.6	0.7
1-26 (DOWNGRADIENT)			<0.6	

PLANT ONE
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.05	<0.05	<0.05	<0.05
1-23 (HIGHWALL SEEP)		<0.05	<0.05	<0.05
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.05	<0.05	<0.05	<0.05
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.05			
1-6 (52 FT)	<0.05			
1-6 (55 FT)	<0.05			
1-6A (52 FT.,POZ-O-TEC)	<0.05			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.05			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.05	<0.05	<0.05	<0.05
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.05	<0.05	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.05	<0.05	<0.05
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.05	<0.05	<0.05	<0.05
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.05	<0.05	<0.05
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.05			
1-15A (STRIP SPOIL UNDER WASTE)		<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.05	<0.05	SP
1-8 (29 FT,SAND)	<0.05			
1-8 (40 FT,SAND)		<0.05	<0.05	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.05	<0.05	<0.05	<0.05
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.05	<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.05			
1-4 (28 FT,SANDY SILT AND SAND)	<0.05			
1-4 (41 FT,SANDY SILT AND SAND)		<0.05	<0.05	<0.05
1-5 (SANDY SILT AND SAND)	<0.05	<0.05	<0.05	<0.05
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.05	<0.05	<0.05
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.05	<0.05	<0.05	<0.05
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.05
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.05		<0.05
1-20 (POND 1,EAST,A-A SECTION)		<0.05	<0.05	<0.05

25 Lead

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.05	<0.05	<0.05
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.05
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.05
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.05
RIVER WATERS				
1-16 (BASELINE)		<0.05	<0.05	<0.05
1-17 (DOWNGRADIENT)		<0.05	<0.05	<0.05
1-24 (DOWNGRADIENT)			<0.05	
1-25 (DOWNGRADIENT)			<0.05	<0.05
1-26 (DOWNGRADIENT)			<0.05	

PLANT ONE
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	12.9	9.32	13.9	12.7
1-23 (HIGHWALL SEEP)		4.5	4.35	<0.05
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	10.6	12.5	12.4	14
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	2.67			
1-6 (52 FT)	2.75			
1-6 (55 FT)	3.25			
1-6A (52 FT.,POZ-O-TEC)	6.76			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	6.53			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	7.22	8.84	9.35	11.4
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		1.94	1.71	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		3.56	2.96	0.63
1-12 (WELL,BENCH A,SAND UNDER WASTE)	7.3	7.31	8.08	9.86
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		2.53	2.22	<0.05
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		7.65	7.37	5.92
1-15 (BENCH D,PIEZOMETER IN SHALE)	12.6			
1-15A (STRIP SPOIL UNDER WASTE)		13.8	14.3	18.6
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		3.19	2.9	SP
1-8 (29 FT,SAND)	3.43			
1-8 (40 FT,SAND)		5.41	6.26	5.52
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	5.15	4.6	5.15	6.01
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	7.16	7.51	7.89	8.75
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	3.23			
1-4 (28 FT,SANDY SILT AND SAND)	4.29			
1-4 (41 FT,SANDY SILT AND SAND)		7.22	8.17	6.91
1-5 (SANDY SILT AND SAND)	9.29	7.9	8.69	8.14
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		2.06	1.71	0.99
1-21 (POND 3,INFLUENT,C-C SECTION)	8.54	10.6	9.4	<0.05
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.05
1-19 (POND 2,MIDDLE,B-B SECTION)		1.02		<0.05
1-20 (POND 1,EAST,A-A SECTION)		1.07	0.78	1.45

26 Silicon

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		7.38	6.09	<0.05
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.05
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.05
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				5.27
RIVER WATERS				
1-16 (BASELINE)		2.23	1.55	2.4
1-17 (DOWNGRADIENT)		2.08	1.57	2.61
1-24 (DOWNGRADIENT)			1.31	
1-25 (DOWNGRADIENT)			1.44	1.95
1-26 (DOWNGRADIENT)			1.47	

PLANT ONE
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	2.74	0.84	2.83	4.57
1-23 (HIGHWALL SEEP)		0.06	0.065	0.064
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	0.393	0.317	0.336	0.336
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	3.9			
1-6 (52 FT)	4.18			
1-6 (55 FT)	4.05			
1-6A (52 FT.,POZ-O-TEC)	1.5			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	1.51			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	1.15	0.349	0.366	0.384
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		2.94	3.05	3.01
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		1.58	1.71	1.35
1-12 (WELL,BENCH A,SAND UNDER WASTE)	1.09	0.601	0.538	0.292
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		3	2.67	2.16
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		3.38	3.61	3.64
1-15 (BENCH D,PIEZOMETER IN SHALE)	1.28			
1-15A (STRIP SPOIL UNDER WASTE)		0.921	1.04	0.76
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		0.284	0.259	SP
1-8 (29 FT,SAND)	0.173			
1-8 (40 FT,SAND)		0.166	0.214	0.348
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.955	0.681	0.709	0.768
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	0.264	0.196	0.204	0.234
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	0.806			
1-4 (28 FT,SANDY SILT AND SAND)	0.229			
1-4 (41 FT,SANDY SILT AND SAND)		0.591	0.619	0.723
1-5 (SANDY SILT AND SAND)	0.579	0.464	0.397	0.413
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		1.69	1.94	0.972
1-21 (POND 3,INFLUENT,C-C SECTION)	2.69	2.65	2.7	2.53
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.636
1-19 (POND 2,MIDDLE,B-B SECTION)		0.456		0.36
1-20 (POND 1,EAST,A-A SECTION)		0.625	0.729	0.385

27 Strontium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		3.48	2.97	2.57
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				4.36
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				1.37
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				3.06
RIVER WATERS				
1-16 (BASELINE)		0.122	0.13	0.183
1-17 (DOWNGRADIENT)		0.113	0.129	0.174
1-24 (DOWNGRADIENT)			0.123	
1-25 (DOWNGRADIENT)			0.131	0.168
1-26 (DOWNGRADIENT)			0.13	

PLANT ONE
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.01	<0.01	<0.01	<0.01
1-23 (HIGHWALL SEEP)		0.01	<0.01	<0.01
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.01	0.03	0.01	<0.01
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.12			
1-6 (52 FT)	<0.01			
1-6 (55 FT)	<0.01			
1-6A (52 FT.,POZ-O-TEC)	<0.01			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.01			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.01	<0.01	0.03	<0.01
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.01	<0.01	<0.01
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.01	<0.01	<0.01
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.01	<0.01	0.01	<0.01
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.01	<0.01	<0.01
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.01	<0.01	<0.01
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.01			
1-15A (STRIP SPOIL UNDER WASTE)		<0.01	<0.01	<0.01
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.01	0.02	SP
1-8 (29 FT,SAND)	<0.01			
1-8 (40 FT,SAND)		0.03	0.02	0.02
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.01	<0.01	<0.01	0.02
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.01	0.01	0.03	<0.01
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.01			
1-4 (28 FT,SANDY SILT AND SAND)	<0.01			
1-4 (41 FT,SANDY SILT AND SAND)		<0.01	<0.01	0.12
1-5 (SANDY SILT AND SAND)	<0.01	<0.01	0.01	0.1
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.01	<0.01	<0.01
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.01	<0.01	<0.01	<0.01
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.01
1-19 (POND 2,MIDDLE,B-B SECTION)		0.01		<0.01
1-20 (POND 1,EAST,A-A SECTION)		<0.01	<0.01	<0.01

28 Thorium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.01	<0.01	<0.01
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.01
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.01
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.01
RIVER WATERS				
1-16 (BASELINE)		0.02	<0.01	<0.01
1-17 (DOWNGRADIENT)		0.01	<0.01	<0.01
1-24 (DOWNGRADIENT)			<0.01	
1-25 (DOWNGRADIENT)			<0.01	0.04
1-26 (DOWNGRADIENT)			<0.01	

Note: The few real values observed above detection limit are not likely to be real since blank levels ranged from 0.01 to 0.04 ppm with ten out of eighteen blanks showing detectable levels. Average blank level was 0.02 ± 0.02 ppm

PLANT ONE
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.005	<0.005	<0.005	<0.005
1-23 (HIGHWALL SEEP)		<0.005	<0.005	<0.005
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.005	<0.005	<0.005	0.015
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.007			
1-6 (52 FT)	0.021			
1-6 (55 FT)	<0.005			
1-6A (52 FT.,POZ-O-TEC)	<0.005			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.005			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.005	<0.005	<0.005	0.01
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.005	<0.005	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.005	<0.005	<0.005
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.005	<0.005	<0.005	0.01
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.005	<0.005	<0.005
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.005	<0.005	<0.005
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.005			
1-15A (STRIP SPOIL UNDER WASTE)		<0.005	<0.005	0.02
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.005	<0.005	SP
1-8 (29 FT,SAND)	<0.005			
1-8 (40 FT,SAND)		<0.005	<0.005	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.005	<0.005	<0.005	0.006
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.005	<0.005	<0.005	<0.005
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.005			
1-4 (28 FT,SANDY SILT AND SAND)	<0.005			
1-4 (41 FT,SANDY SILT AND SAND)		<0.005	<0.005	0.009
1-5 (SANDY SILT AND SAND)	<0.005	<0.005	<0.005	0.009
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.005	<0.005	0.023
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.005	<0.005	<0.005	<0.005
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.005
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.005		0.01
1-20 (POND 1,EAST,A-A SECTION)		<0.005	<0.005	0.019

29 Titanium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.005	<0.005	<0.005
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.005
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.007
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.005
RIVER WATERS				
1-16 (BASELINE)		<0.005	<0.005	0.017
1-17 (DOWNGRADIENT)		<0.005	<0.005	0.023
1-24 (DOWNGRADIENT)			<0.005	
1-25 (DOWNGRADIENT)			<0.005	0.019
1-26 (DOWNGRADIENT)			<0.005	

PLANT ONE
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.005	<0.005	<0.005	<0.005
1-23 (HIGHWALL SEEP)		0.007	<0.005	<0.005
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.005	0.008	<0.005	<0.005
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	0.094			
1-6 (52 FT)	0.038			
1-6 (55 FT)	0.075			
1-6A (52 FT.,POZ-O-TEC)	0.128			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	0.099			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.005	<0.005	<0.005	<0.005
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		0.049	<0.005	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		0.037	0.02	<0.005
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.005	<0.005	<0.005	<0.005
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		0.016	0.026	<0.005
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.005	<0.005	<0.005
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.005			
1-15A (STRIP SPOIL UNDER WASTE)		<0.005	<0.005	<0.005
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.005	<0.005	SP
1-8 (29 FT,SAND)	<0.005			
1-8 (40 FT,SAND)		<0.005	<0.005	<0.005
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.005	<0.005	<0.005	<0.005
1-10 (36 FT,SAND,RES. SOILS)	<0.005	<0.005	<0.005	<0.005
1-10 (37 FT,SAND,RES. SOILS)				
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.005			
1-4 (28 FT,SANDY SILT AND SAND)	<0.005			
1-4 (41 FT,SANDY SILT AND SAND)		<0.005	<0.005	<0.005
1-5 (SANDY SILT AND SAND)	<0.005	<0.005	<0.005	<0.005
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.005	<0.005	<0.005
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.005	<0.005	<0.005	<0.005
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.005
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.005		<0.005
1-20 (POND 1,EAST,A-A SECTION)		<0.005	<0.005	<0.005

30 Vanadium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.005	<0.005	<0.005
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.005
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.005
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.005
RIVER WATERS				
1-16 (BASELINE)		<0.005	<0.005	<0.005
1-17 (DOWNGRADIENT)		<0.005	<0.005	<0.005
1-24 (DOWNGRADIENT)			<0.005	
1-25 (DOWNGRADIENT)			<0.005	<0.005
1-26 (DOWNGRADIENT)			<0.005	

PLANT ONE
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS 33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.05	0.09	<0.05	0.17
1-23 (HIGHWALL SEEP)		0.23	0.18	<0.05
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.05	0.18	0.19	0.3
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.05			
1-6 (52 FT)	<0.05			
1-6 (55 FT)	<0.05			
1-6A (52 FT.,POZ-O-TEC)	<0.05			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.05			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	0.05	<0.05	<0.05	0.05
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.05	<0.05	0.07
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.05	<0.05	<0.05
1-12 (WELL,BENCH A,SAND UNDER WASTE)	0.05	<0.05	<0.05	0.05
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.05	<0.05	0.07
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.05	<0.05	0.08
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.05			
1-15A (STRIP SPOIL UNDER WASTE)		<0.05	<0.05	0.11
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.05	<0.05	SP
1-8 (29 FT,SAND)	<0.05			
1-8 (40 FT,SAND)		<0.05	<0.05	0.06
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	0.08	<0.05	<0.05	0.12
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.05	<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.05			
1-4 (28 FT,SANDY SILT AND SAND)	<0.05			
1-4 (41 FT,SANDY SILT AND SAND)		0.07	0.06	0.14
1-5 (SANDY SILT AND SAND)	0.08	0.52	<0.05	0.08
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.05	<0.05	0.1
1-21 (POND 3,INFLUENT,C-C SECTION)	0.19	0.55	0.82	0.54
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				0.2
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.05		<0.05
1-20 (POND 1,EAST,A-A SECTION)		<0.05	<0.05	<0.05

31 Zinc

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.05	<0.05	0.12
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.05
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				0.28
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				0.09
RIVER WATERS				
1-16 (BASELINE)		<0.05	<0.05	<0.05
1-17 (DOWNGRADIENT)		<0.05	<0.05	<0.05
1-24 (DOWNGRADIENT)			<0.05	
1-25 (DOWNGRADIENT)			<0.05	<0.05
1-26 (DOWNGRADIENT)			<0.05	

PLANT ONE
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)	<0.02	<0.05	<0.05	<0.05
1-23 (HIGHWALL SEEP)		<0.05	<0.05	<0.05
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)	<0.02	<0.05	<0.05	<0.05
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.02			
1-6 (52 FT)	<0.02			
1-6 (55 FT)	<0.02			
1-6A (52 FT.,POZ-O-TEC)	<0.02			
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.02			
1-13 (BENCH A,RES. SOIL UNDER WASTE)	<0.02	<0.05	<0.05	<0.05
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		<0.05	<0.05	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		<0.05	<0.05	<0.05
1-12 (WELL,BENCH A,SAND UNDER WASTE)	<0.02	<0.05	<0.05	<0.05
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		<0.05	<0.05	<0.05
1-15 (BENCH D,PIEZOMETER IN SHALE)	<0.02			
1-15A (STRIP SPOIL UNDER WASTE)		<0.05	<0.05	0.06
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		<0.05	<0.05	SP
1-8 (29 FT,SAND)	<0.02			
1-8 (40 FT,SAND)		<0.05	<0.05	<0.05
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)	<0.02	<0.05	<0.05	<0.05
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)	<0.02	<0.05	<0.05	<0.05
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)	<0.02			
1-4 (28 FT,SANDY SILT AND SAND)	<0.02			
1-4 (41 FT,SANDY SILT AND SAND)		<0.05	<0.05	<0.05
1-5 (SANDY SILT AND SAND)	<0.02	<0.05	<0.05	<0.05
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		<0.05	<0.05	0.05
1-21 (POND 3,INFLUENT,C-C SECTION)	<0.02	<0.05	<0.05	<0.05
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				<0.05
1-19 (POND 2,MIDDLE,B-B SECTION)		<0.05		<0.05
1-20 (POND 1,EAST,A-A SECTION)		<0.05	<0.05	<0.05

32 Zirconium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		<0.05	<0.05	<0.05
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				<0.05
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				<0.05
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				<0.05
RIVER WATERS				
1-16 (BASELINE)		<0.05	<0.05	<0.05
1-17 (DOWNGRADIENT)		<0.05	<0.05	<0.05
1-24 (DOWNGRADIENT)			<0.05	
1-25 (DOWNGRADIENT)			<0.05	<0.05
1-26 (DOWNGRADIENT)			<0.05	

PLANT ONE
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		1.1	16.2	
1-23 (HIGHWALL SEEP)			<0.15	
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		0.4	8.6	
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	7.2			
1-6 (52 FT)	8.9			
1-6 (55 FT)	8.7			
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	9.5			
1-13 (BENCH A,RES. SOIL UNDER WASTE)			0.54	
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		5.9	7.7	
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		11.1	7.3	
1-12 (WELL,BENCH A,SAND UNDER WASTE)			1.5	
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		162	266	
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)				
1-15 (BENCH D,PIEZOMETER IN SHALE)				
1-15A (STRIP SPOIL UNDER WASTE)				
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)				SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)				
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		0.44		
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)			<0.15	
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)				
1-5 (SANDY SILT AND SAND)				
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)				
1-21 (POND 3,INFLUENT,C-C SECTION)				
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				
1-19 (POND 2,MIDDLE,B-B SECTION)				
1-20 (POND 1,EAST,A-A SECTION)			2.7	

33 Arsenic

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)			1.6	
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				
RIVER WATERS				
1-16 (BASELINE)			0.21	
1-17 (DOWNGRADIENT)			0.3	
1-24 (DOWNGRADIENT)				
1-25 (DOWNGRADIENT)				
1-26 (DOWNGRADIENT)				

PLANT ONE
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		0.05	<0.05	
1-23 (HIGHWALL SEEP)			<0.26	
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		<0.05	<0.05	
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)	<0.26			
1-6 (52 FT)	<0.26			
1-6 (55 FT)	0.33			
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL	<0.26			
1-13 (BENCH A,RES. SOIL UNDER WASTE)			<0.26	
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		3.7	<0.05	
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		2.5	<0.05	
1-12 (WELL,BENCH A,SAND UNDER WASTE)			0.46	
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		<0.05	<0.05	
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)				
1-15 (BENCH D,PIEZOMETER IN SHALE)				
1-15A (STRIP SPOIL UNDER WASTE)				
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)				SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)				
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		<0.26		
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)			<0.26	
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)				
1-5 (SANDY SILT AND SAND)				
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)				
1-21 (POND 3,INFLUENT,C-C SECTION)				
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				
1-19 (POND 2,MIDDLE,B-B SECTION)				
1-20 (POND 1,EAST,A-A SECTION)			6.35	

34 Selenium

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)			<0.26	
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				
RIVER WATERS				
1-16 (BASELINE)			<0.26	
1-17 (DOWNGRADIENT)			<0.26	
1-24 (DOWNGRADIENT)				
1-25 (DOWNGRADIENT)				
1-26 (DOWNGRADIENT)				

PLANT ONE
CONCENTRATION OF 38 PH FIELD -

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		5.1	5.8	6.6
1-23 (HIGHWALL SEEP)		4.9	4.8	7.4
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		4.5	*	5
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)				
1-6 (52 FT)				
1-6 (55 FT)				
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL				
1-13 (BENCH A,RES. SOIL UNDER WASTE)		6.3	6.3	7.9
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)				9.9
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)				9.4
1-12 (WELL,BENCH A,SAND UNDER WASTE)		7	6.5	6.5
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)				
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		6.4	8.5	6.3
1-15 (BENCH D,PIEZOMETER IN SHALE)				
1-15A (STRIP SPOIL UNDER WASTE)		6.7	6.3	6.6
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		6.9	7.2	SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)		6	5.7	5.3
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		5.9	6.1	6.1
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)		6.8	6.9	6.9
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)		5.2	5.4	5.8
1-5 (SANDY SILT AND SAND)		5.2	5.4	5.4
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		7.3	8	8.3
1-21 (POND 3,INFLUENT,C-C SECTION)		6.8	6.9	7.6
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				8.4
1-19 (POND 2,MIDDLE,B-B SECTION)		8.5		8.5
1-20 (POND 1,EAST,A-A SECTION)		8.6	8.5	9.1

38 pH Field

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		6.7	6.9	7.5
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				10.1
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				7.7
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				7.2
RIVER WATERS				
1-16 (BASELINE)		6	6.2	6.9
1-17 (DOWNGRADIENT)		8.4	6.2	7
1-24 (DOWNGRADIENT)			6.4	
1-25 (DOWNGRADIENT)			6.2	7.1
1-26 (DOWNGRADIENT)			6.1	

PLANT ONE
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		2200	3000	3375
1-23 (HIGHWALL SEEP)		155	153	148
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		805	775	685
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)				
1-6 (52 FT)				
1-6 (55 FT)				
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL				
1-13 (BENCH A,RES. SOIL UNDER WASTE)		1098	925	910
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)				5000
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)				4200
1-12 (WELL,BENCH A,SAND UNDER WASTE)		1680	1795	1000
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)				
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		3225	3900	3200
1-15 (BENCH D,PIEZOMETER IN SHALE)				
1-15A (STRIP SPOIL UNDER WASTE)		2150	2600	2250
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		760	665	SP
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)		505	505	800
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		2300	2400	2100
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)		460	490	525
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)		1945	173	1850
1-5 (SANDY SILT AND SAND)		1185	1065	990
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		2300	2600	1400
1-21 (POND 3,INFLUENT,C-C SECTION)		*	3000	2900
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				1750
1-19 (POND 2,MIDDLE,B-B SECTION)		1395		975
1-20 (POND 1,EAST,A-A SECTION)		1750	1900	1310

40 Conductivity Field

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		3000	3700	2750
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				4400
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				2500
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				3050
RIVER WATERS				
1-16 (BASELINE)		230	225	255
1-17 (DOWNGRADIENT)		1390	225	325
1-24 (DOWNGRADIENT)			250	
1-25 (DOWNGRADIENT)			240	270
1-26 (DOWNGRADIENT)			225	

PLANT ONE
CONCENTRATION OF 41 GROUNDWATER LEVEL (TOC) FT

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		23	24	24.9
1-23 (HIGHWALL SEEP)		NA	NA	
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)		23.1	25.5	27.7
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)				
1-6 (52 FT)				
1-6 (55 FT)				
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL				
1-13 (BENCH A,RES. SOIL UNDER WASTE)		46.2	47.9	48.2
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)		NA	NA	
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		NA	NA	
1-12 (WELL,BENCH A,SAND UNDER WASTE)		45.7	46.2	48.6
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)		NA	NA	
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		12.8	13.3	13.8
1-15 (BENCH D,PIEZOMETER IN SHALE)		56.2		
1-15A (STRIP SPOIL UNDER WASTE)		56.8	57.1	58.1
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		35	36	37.2
1-8 (29 FT,SAND)				
1-8 (40 FT,SAND)		28.6	30.4	31.7
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		24.6	25.1	26.3
1-10 (36 FT,SAND,RES. SOILS)				
1-10 (37 FT,SAND,RES. SOILS)		12.7	14.2	16.2
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)				
1-4 (41 FT,SANDY SILT AND SAND)		26.8	28.1	30
1-5 (SANDY SILT AND SAND)		15.8	17.6	19.3
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		NA	NA	
1-21 (POND 3,INFLUENT,C-C SECTION)		NA	NA	
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				
1-19 (POND 2,MIDDLE,B-B SECTION)		NA		
1-20 (POND 1,EAST,A-A SECTION)		NA	NA	

SUMMARY OF GROUNDWATER LEVELS -- ELRAMA

(in feet from top of casing)*

ADL Wells	TOC	Date 3/31/81	4/27/81	5/25/81	11/02/81	9/21/82
1-2	863.1	23.1(840.0)	23.0(840.1)	24.0(839.1)	24.9(838.2)	-
1-3	780.9	13.1(767.8)	12.8(768.1)	13.3(767.6)	13.8(767.1)	14.0(766.9)
1-4	759.8	28.2(731.6)	26.8(733.0)	28.1(731.7)	30.0(729.8)	31.6(728.2)
1-5	745.1	16.8(728.3)	15.7(729.4)	17.6(727.5)	19.3(725.8)	-
1-8	756.1	29.3(726.8)	28.6(727.5)	30.4(725.7)	31.7(724.4)	34.0(722.1)
1-9	757.4	26.2(731.2)	24.6(732.8)	25.1(732.3)	26.3(731.1)	29.0(728.4)
1-10	742.5	14.1(728.4)	12.7(729.8)	14.2(728.3)	16.2(726.3)	18.0(724.5)
1-11	765.5	37.7(727.8)	35.0(730.5)	36.0(729.5)	37.2(728.3)	-
1-12	778.5	46.3(732.2)	45.7(732.8)	46.2(732.3)	48.6(729.9)	50.6(727.9)
1-13	772.2	47.4(729.8)	46.2(731.0)	47.9(729.3)	48.2(729.0)	53.0(724.2)
1-14	755.4	24.6(730.8)	23.1(732.3)	25.5(729.9)	27.7(727.7)	29.5(725.9)
1-15A	839.6	56.9(782.7)	56.8(782.8)	57.1(782.5)	58.1(781.5)	61.7(777.9)

*Values in parenthesis are feet relative to mean sea level.

TOC = Top of casing elevation in feet relative to mean sea level.

41 Groundwater Level

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		NA	NA	
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				
RIVER WATERS				
1-16 (BASELINE)		NA	NA	
1-17 (DOWNGRADIENT)		NA	NA	
1-24 (DOWNGRADIENT)			NA	
1-25 (DOWNGRADIENT)			NA	
1-26 (DOWNGRADIENT)			NA	

PLANT ONE
CONCENTRATION OF 42 DISSOLVED OXYGEN PPM

SAMPLING POINT DESIGNATION	TRIPS			
	33181	42781	52581	110281
UPGRADIENT WATERS				
1-2 (STRIP SOIL UNDER WASTE FILL)		0.8	0.3	2
1-23 (HIGHWALL SEEP)		12		
BASELINE				
1-14 (BASELINE SAND,SILT,SHALE)			2.7-3.7	2.4
WATER IN AND UNDER WASTE AREA				
EAST (A-A CROSS-SECTION)				
1-6 (50 FT)				
1-6 (52 FT)				
1-6 (55 FT)				
1-6A (52 FT.,POZ-O-TEC)				
1-6A (50-55 FT.,POZ-O-TEC)-TEMP WELL		1.2-1.6		
1-13 (BENCH A,RES. SOIL UNDER WASTE)			3	
1-13A (LYSIMTR,BENCH A,WASTE ABOVE CLAYEY SILT)				
MIDDLE (B-B CROSS-SECTION)				
1-7 (LYSIMETER,BENCH A,POZ-O-TEC AND SILT)		1.2-2.2	0.2-2.3	1.3
1-12 (WELL,BENCH A,SAND UNDER WASTE)				
1-12A (LYSIMETER,BENCHA,WASTE ABOVE CLAY)				
WEST (C-C CROSS-SECTION)				
1-3 (BENCH A,STRIP SPOIL UNDER WASTE)		0.8	0.2-1.5	0.3
1-15 (BENCH D,PIEZOMETER IN SHALE)		0.9	0.4	
1-15A (STRIP SPOIL UNDER WASTE)				
DOWNGRADIENT WELLS				
EAST (A-A CROSS-SECTION)				
1-11 (SILT,SAND)		11		SP
1-8 (29 FT,SAND)		3.5-4.3	5.3	5.15
1-8 (40 FT,SAND)				
MIDDLE (B-B CROSS-SECTION)				
1-9 (SAND ABOVE SHALE)		5.3	4	3.3
1-10 (36 FT,SAND,RES. SOILS)		0.9	0.2-0.6	0
1-10 (37 FT,SAND,RES. SOILS)				
WEST (C-C CROSS-SECTION)				
1-4 (8 FT,SANDY SILT AND SAND)				
1-4 (28 FT,SANDY SILT AND SAND)		1.5-2.5	1.8	
1-4 (41 FT,SANDY SILT AND SAND)		2.5-3.5	0.2-0.8	
1-5 (SANDY SILT AND SAND)				
SEDIMENTATION PONDS				
1-18 (POND 3,WEST,C-C SECTION)		11	8.5	7.9
1-21 (POND 3,INFLUENT,C-C SECTION)			6.2	
1-30 (POND 3,RUNOFF DOWNCOMBER INFLUENT)				
1-19 (POND 2,MIDDLE,B-B SECTION)		9.5		9
1-20 (POND 1,EAST,A-A SECTION)		6.3	8.5	8.9

42 Dissolved Oxygen

	33181	42781	52581	110281
SEEPWATERS				
1-22 (MAIN WEST,C-C SECTION)		12	5.1	9.1
1-27 (LFT 1-22,DITCH,MIX.28,29,22,INF.POND C)				4.1
1-28 (IN DRAINAGE DITCH,RT OF 1-29)				9.6
1-29 (LANDFILL DRAINPIPE,RT OF 1-22)				7.5
RIVER WATERS				
1-16 (BASELINE)		10.4		
1-17 (DOWNGRADIENT)		9		
1-24 (DOWNGRADIENT)				
1-25 (DOWNGRADIENT)				
1-26 (DOWNGRADIENT)				

PLANT ONE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	9149
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	9154
1-6 (20 FT)	9164
1-6 (53 FT)	9250
1-6 (75 FT)	9157
1-6A (53 FT)	9168
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	9227
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	9176

PLANT ONE
SOLID CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	<0.5
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	<0.5
1-6 (20 FT)	<0.5
1-6 (53 FT)	<0.5
1-6 (75 FT)	<0.5
1-6A (53 FT)	<0.5
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<0.5
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	<0.5

PLANT ONE
SOLID CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	89800
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	81000
1-6 (20 FT)	112000
1-6 (53 FT)	62400
1-6 (75 FT)	58400
1-6A (53 FT)	73000
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	52400
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	61800

PLANT ONE
SOLID CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	3.12
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	3.29
1-6 (20 FT)	5.35
1-6 (53 FT)	2.46
1-6 (75 FT)	2.15
1-6A (53 FT)	3.51
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	2.1
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	2.75

PLANT ONE
SOLID CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	2790
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	94500
1-6 (20 FT)	13100
1-6 (53 FT)	149000
1-6 (75 FT)	156000
1-6A (53 FT)	128000
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	178000
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	143000

PLANT ONE
SOLID CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	2.1
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	2.2
1-6 (20 FT)	<0.8
1-6 (53 FT)	3.2
1-6 (75 FT)	2.8
1-6A (53 FT)	2.8
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	3.4
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	3

PLANT ONE
SOLID CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS
UPGRADIENT SOILS	33181
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	12
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	9
1-6 (20 FT)	16
1-6 (53 FT)	6
1-6 (75 FT)	6
1-6A (53 FT)	14
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	7
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	13

PLANT ONE
SOLID CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	99.2
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	106
1-6 (20 FT)	132
1-6 (53 FT)	84.6
1-6 (75 FT)	81.8
1-6A (53 FT)	95.9
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	70.3
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	85.2

PLANT ONE
SOLID CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	32.7
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	45.1
1-6 (20 FT)	66.2
1-6 (53 FT)	43.4
1-6 (75 FT)	35.1
1-6A (53 FT)	45.1
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	32.2
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	37.6

PLANT ONE
SOLID CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	24900
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	70200
1-6 (20 FT)	135000
1-6 (53 FT)	41800
1-6 (75 FT)	45300
1-6A (53 FT)	55300
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	36400
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	42500

PLANT ONE
SOLID CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	16000
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	12800
1-6 (20 FT)	17700
1-6 (53 FT)	9300
1-6 (75 FT)	8500
1-6A (53 FT)	10300
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	7600
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	9800

PLANT ONE
SOLID CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	4160
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	7810
1-6 (20 FT)	6120
1-6 (53 FT)	6900
1-6 (75 FT)	7420
1-6A (53 FT)	6230
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	13500
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	7770

PLANT ONE
SOLID CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	328
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	204
1-6 (20 FT)	576
1-6 (53 FT)	90
1-6 (75 FT)	135
1-6A (53 FT)	116
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	77.6
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	117

PLANT ONE
SOLID CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	<30
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	<30
1-6 (20 FT)	<30
1-6 (53 FT)	<30
1-6 (75 FT)	<30
1-6A (53 FT)	<30
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<30
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	<30

PLANT ONE
SOLID CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	2700
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	1900
1-6 (20 FT)	2700
1-6 (53 FT)	1200
1-6 (75 FT)	1500
1-6A (53 FT)	1300
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	900
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	1500

PLANT ONE
SOLID CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	21
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	28
1-6 (20 FT)	20
1-6 (53 FT)	30
1-6 (75 FT)	29
1-6A (53 FT)	31
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	29
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	29

PLANT ONE
SOLID CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	700
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	810
1-6 (20 FT)	970
1-6 (53 FT)	670
1-6 (75 FT)	780
1-6A (53 FT)	770
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	670
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	670

PLANT ONE
SOLID CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	10
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	<5
1-6 (20 FT)	<5
1-6 (53 FT)	20
1-6 (75 FT)	<5
1-6A (53 FT)	10
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<5
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	15

PLANT ONE
SOLID CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
UPGRADIENT SOILS	33181
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	156
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	434
1-6 (20 FT)	542
1-6 (53 FT)	311
1-6 (75 FT)	389
1-6A (53 FT)	409
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	309
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	370

PLANT ONE
SOLID CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	25
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	10
1-6 (20 FT)	28
1-6 (53 FT)	<1
1-6 (75 FT)	<1
1-6A (53 FT)	10
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<1
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	3

PLANT ONE
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	5380
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	4540
1-6 (20 FT)	6100
1-6 (53 FT)	3190
1-6 (75 FT)	3070
1-6A (53 FT)	3780
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	2680
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	3150

PLANT ONE
SOLID CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	112
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	119
1-6 (20 FT)	173
1-6 (53 FT)	93.2
1-6 (75 FT)	81.6
1-6A (53 FT)	108
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	75.6
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	94.1

PLANT ONE
SOLID CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	66
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	63
1-6 (20 FT)	69
1-6 (53 FT)	58
1-6 (75 FT)	59
1-6A (53 FT)	68
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	49
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	62

PLANT ONE
SOLID CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	142
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	127
1-6 (20 FT)	172
1-6 (53 FT)	99.1
1-6 (75 FT)	91.1
1-6A (53 FT)	114
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	79.5
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	96.2

PLANT ONE
SOLID CONCENTRATION OF 43 ARSENIC (SOLID) PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	7.3
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	30.3
1-6 (20 FT)	38.5
1-6 (53 FT)	56.3
1-6 (75 FT)	49.8
1-6A (53 FT)	58.5
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	49.4
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	57.2

PLANT ONE
SOLID CONCENTRATION OF 44 SELENIUM (SOLID) PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	2.9
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	4.3
1-6 (20 FT)	1.9
1-6 (53 FT)	6.7
1-6 (75 FT)	5
1-6A (53 FT)	7.4
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	5.6
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	7.7

PLANT ONE
SOLID CONCENTRATION OF 45 TOS (SULFITE) PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	<16000
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	6:600
1-6 (20 FT)	<16000
1-6 (53 FT)	117600
1-6 (75 FT)	131200
1-6A (53 FT)	101600
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	208800
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	128000

PLANT ONE
SOLID CONCENTRATION OF 46 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	58560
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	57600
1-6 (20 FT)	51840
1-6 (53 FT)	155520
1-6 (75 FT)	148800
1-6A (53 FT)	94080
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	105600
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	213120

PLANT ONE
SOLID CONCENTRATION OF 47 PH SLURRY

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	5.5
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	10.4
1-6 (20 FT)	9.4
1-6 (53 FT)	10.7
1-6 (75 FT)	11
1-6A (53 FT)	11.2
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	11.2
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	10.3

PLANT ONE
SOLID CONCENTRATION OF 48 ACID INSOLUBLES PERCENT

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	91.3
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	62.4
1-6 (20 FT)	94.9
1-6 (53 FT)	83.5
1-6 (75 FT)	41.8
1-6A (53 FT)	51.9
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	41.8
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	50.4

PLANT ONE
SOLID CONCENTRATION OF 49 SOLIDS PERCENT

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	87.2
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	72.1
1-6 (20 FT)	79.1
1-6 (53 FT)	61.6
1-6 (75 FT)	65.6
1-6A (53 FT)	60.5
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	58.5
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	63

PLANT ONE
SOLID CONCENTRATION OF 50 FLUORIDE (EXTRACTABLE) PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	<1
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	<1
1-6 (20 FT)	<1
1-6 (53 FT)	<1
1-6 (75 FT)	<1
1-6A (53 FT)	<1
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<1
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	<1

PLANT ONE
SOLID CONCENTRATION OF 51 CHLORIDE (EXTRACTABLE) PPM

SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	<5
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	39
1-6 (20 FT)	15
1-6 (53 FT)	71
1-6 (75 FT)	25
1-6A (53 FT)	29
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	39
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	46

PLANT ONE
SOLID CONCENTRATION OF 52 NITRATE (EXTRACTABLE) PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	<10
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	<10
1-6 (20 FT)	<10
1-6 (53 FT)	<10
1-6 (75 FT)	<10
1-6A (53 FT)	<10
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<10
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	<10

PLANT ONE
SOLID CONCENTRATION OF 53 SULFATE (EXTRACTABLE) PPM

SAMPLING POINT DESIGNATION	TRIPS
UPGRADIENT SOILS	33181
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	220
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	1600
1-6 (20 FT)	390
1-6 (53 FT)	1610
1-6 (75 FT)	1600
1-6A (53 FT)	1620
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	1580
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	1620

PLANT ONE
SOLID CONCENTRATION OF 54 PHOSPHATE (EXTRACTABLE) PPM

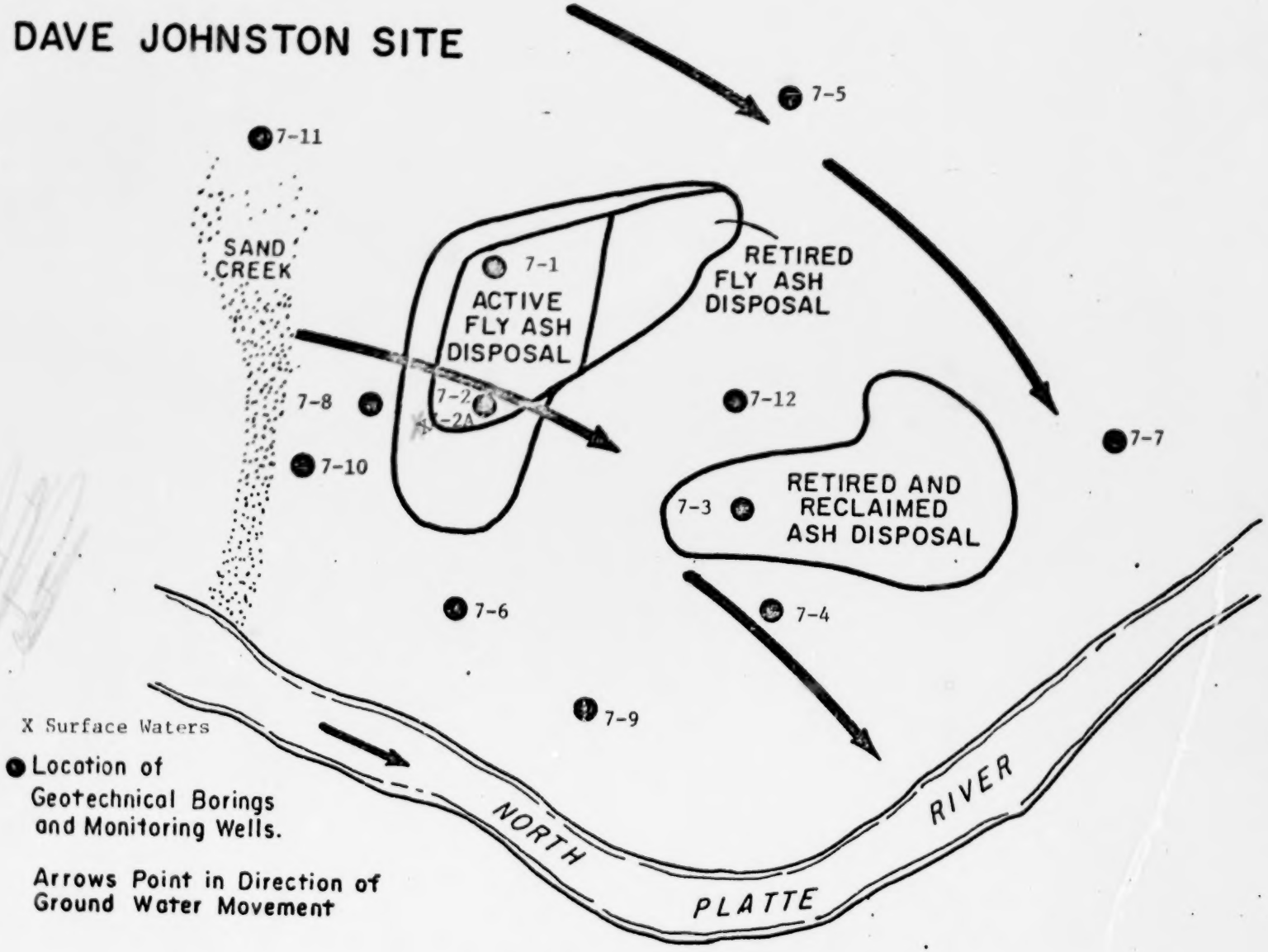
SAMPLING POINT DESIGNATION	TRIPS 33181
UPGRADIENT SOILS	
1-2 (19-21 FT, STRIP SOIL UNDER WASTE FILL)	<0.5
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	<0.5
1-6 (20 FT)	<0.5
1-6 (53 FT)	<0.5
1-6 (75 FT)	<0.5
1-6A (53 FT)	<0.5
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	<0.5
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	<0.5

PLANT ONE
SOLID CONCENTRATION OF 55 ALKALINITY (OH) PPM

SAMPLING POINT DESIGNATION	TRIPS
	33181
UPGRADIENT SOILS	
1-2 (19-21 FT,STRIP SOIL UNDER WASTE FILL)	0
WASTE SAMPLES	
EAST (A-A CROSS-SECTION)	
1-6 (15 FT)	901
1-6 (20 FT)	<340
1-6 (53 FT)	748
1-6 (75 FT)	1581
1-6A (53 FT)	2210
MIDDLE (B-B CROSS-SECTION)	
1-7 (14 FT)	2550
WEST (C-C CROSS-SECTION)	
1-15 (6 FT)	714

Dave Johnston

DAVE JOHNSTON SITE



PLANT SEVEN

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	52981	70681	102081	51881
BACKGROUND				
7-5	342	1007	1038	1278
7-11 (SAND CREEK)	347	1015	1052	1247
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)	339	1001	1034	1256
7-2A (ACTIVE, IN ASH)			1069	
7-3 (INACTIVE, UNDER ASH)	340	1025	1046	1257
PERIPHERAL				
7-8	345	1019	1054	1249
7-7	344	1013	1041	1258
7-10		1017	1056	1248
DOWNGRADIENT				
7-4 (OLD AREA)	341	1029	1066	1254
7-6 (ACTIVE AREA)	343	1023	1060	1251
7-9	346	1021	1068	1255
BETWEEN ACTIVE/INACTIVE AREA				
7-12	348	1027	1058	1250
OTHERS				
SURFACE WATER[a]			1048	

[a]See map

PLANT SEVEN
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5	1.4	3.7	2.6	1.6
7-11 (SAND CREEK)	0.75	1	1	1.3
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)	0.77	3.9	3.2	1.1
7-2A (ACTIVE, IN ASH)			<1	
7-3 (INACTIVE, UNDER ASH)	0.6	2.8	1.1	1.3
PERIPHERAL				
7-8	1.6	3.7	1.5	1.1
7-7	0.39	<0.2	0.5	<0.2
7-10		4.2	0.7	0.6
DOWNGRADIENT				
7-4 (OLD AREA)	0.66	3.3	0.9	0.5
7-6 (ACTIVE AREA)	1.8	2.6	0.9	0.7
7-9	1.9	3.5	1.8	0.5
BETWEEN ACTIVE/INACTIVE AREA				
7-12	0.48	3	0.7	0.5
OTHERS				
SURFACE WATER			2.8	

PLANT SEVEN
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5	46	36.8	31.8	36
7-11 (SAND CREEK)	4.5	2.1	4.8	3.4
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)	46	41.6	33.4	32.7
7-2A (ACTIVE,IN ASH)			60	
7-3 (INACTIVE,UNDER ASH)	44	47.9	50.8	42.6
PERIPHERAL				
7-8	42	33.8	39.2	33.4
7-7	7.2	6.6	7.6	7
7-10		38.8	31.6	26.8
DOWNGRADIENT				
7-4 (OLD AREA)	61	62.5	44.4	46.4
7-6 (ACTIVE AREA)	51	41.9	38.6	48
7-9	75	52.9	51.2	61
BETWEEN ACTIVE/INACTIVE AREA				
7-12	46	29.8	33	39
OTHERS				
SURFACE WATER			106	

PLANT SEVEN
CONCENTRATION OF 3 NITRATE PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5	6.1	4.5	6.6	15.8
7-11 (SAND CREEK)	13.5	6.5	13.6	15
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)	1.1	4.6	3	3
7-2A (ACTIVE,IN ASH)			<10	
7-3 (INACTIVE,UNDER ASH)	3.5	5.8	6.6	5.4
PERIPHERAL				
7-8	0.81	2.4	2.5	2
7-7	9.6	9.3	14.8	8.2
7-10		1.3	2.5	3.2
DOWNGRADIENT				
7-4 (OLD AREA)	2.6	11.3	7.7	8.6
7-6 (ACTIVE AREA)	3.2	3.8	3	4
7-9	<0.5	5.2	4.2	2.7
BETWEEN ACTIVE/INACTIVE AREA				
7-12	9	5.2	7.7	10.8
OTHERS				
SURFACE WATER			<1	

PLANT SEVEN
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5	1090	1280	880	890
7-11 (SAND CREEK)	144	80	129	38.6
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)	1560	1280	1350	1010
7-2A (ACTIVE,IN ASH)			1780	
7-3 (INACTIVE,UNDER ASH)	726	1050	880	950
PERIPHERAL				
7-8	1030	1510	1300	920
7-7	87.5	73	60.2	44
7-10		1630	960	1010
DOWNGRADIENT				
7-4 (OLD AREA)	949	1040	810	780
7-6 (ACTIVE AREA)	1290	1450	1190	1100
7-9	1150	1340	1040	1070
BETWEEN ACTIVE/INACTIVE AREA				
7-12	1040	1280	880	950
OTHERS				
SURFACE WATER			2450	

PLANT SEVEN
CONCENTRATION OF 5 PHOSPHATE PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<1	<1	<1
7-11 (SAND CREEK)		<1	<1	<1
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<1	<1	<1
7-2A (ACTIVE,IN ASH)			<50	
7-3 (INACTIVE,UNDER ASH)		<1	<1	<1
PERIPHERAL				
7-8		<1	<1	<1
7-7		<1	<1	<1
7-10		<1	<1	<1
DOWNGRADIENT				
7-4 (OLD AREA)		<1	<1	<1
7-6 (ACTIVE AREA)		<1	<1	<1
7-9		<1	<1	<1
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<1	<1	<1
OTHERS				
SURFACE WATER			<1	

PLANT SEVEN
CONCENTRATION OF 6 BROMIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	52081	70681	102081	51882
BACKGROUND				
7-5		1.3	<1	<1
7-11 (SAND CREEK)		<1	<1	<1
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)	2	1.3	<1	<1
7-2A (ACTIVE,IN ASH)			<10	
7-3 (INACTIVE,UNDER ASH)		<1	<1	<1
PERIPHERAL				
7-8		<1	<1	<1
7-7		<1	<1	<1
7-10		<1	<1	<1
DOWNGRADIENT				
7-4 (OLD AREA)		<1	<1	<1
7-6 (ACTIVE AREA)		<1	<1	<1
7-9		<1	<1	<1
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<1	<1	<1
OTHERS				
SURFACE WATER			<1	

PLANT SEVEN
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.005	<0.005	<0.005
7-11 (SAND CREEK)		<0.005	<0.005	<0.005
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.005	<0.005	<0.005
7-2A (ACTIVE,IN ASH)			<0.025	
7-3 (INACTIVE,UNDER ASH)		<0.005	<0.005	<0.005
PERIPHERAL				
7-8		<0.005	<0.005	<0.005
7-7		<0.005	<0.005	<0.005
7-10		<0.005	<0.005	<0.005
DOWNGRADIENT				
7-4 (OLD AREA)		<0.005	<0.005	<0.005
7-6 (ACTIVE AREA)		<0.005	<0.005	<0.005
7-9		<0.005	<0.005	<0.005
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.005	<0.005	<0.005
OTHERS				
SURFACE WATER			<0.005	

PLANT SEVEN
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		0.19	0.07	0.2
7-11 (SAND CREEK)		<0.3	<0.3	<0.3
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.29	0.13	0.3
7-2A (ACTIVE,IN ASH)			<0.05	
7-3 (INACTIVE,UNDER ASH)		0.08	0.06	0.19
PERIPHERAL				
7-8		0.3	0.19	0.27
7-7		<0.3	<0.3	<0.3
7-10		0.38	0.23	0.26
DOWNGRADIENT				
7-4 (OLD AREA)		0.09	0.07	0.1
7-6 (ACTIVE AREA)		0.23	0.08	0.27
7-9		0.17	0.12	0.23
BETWEEN ACTIVE/INACTIVE AREA				
7-12		0.23	0.14	0.23
OTHERS				
SURFACE WATER			0.15	

PLANT SEVEN
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		0.686	0.683	0.692
7-11 (SAND CREEK)		0.064	0.057	0.056
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)		1.8	1.71	1.94
7-2A (ACTIVE, IN ASH)			4.96	
7-3 (INACTIVE, UNDER ASH)		0.741	0.69	0.711
PERIPHERAL				
7-8		1.67	2.24	1.72
7-7		0.032	0.014	0.024
7-10		2.79	2.73	1.92
DOWNGRADIENT				
7-4 (OLD AREA)		0.091	0.105	0.138
7-6 (ACTIVE AREA)		0.659	0.798	0.84
7-9		0.716	0.876	0.851
BETWEEN ACTIVE/INACTIVE AREA				
7-12		0.872	0.925	0.895
OTHERS				
SURFACE WATER			3.82	

PLANT SEVEN
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.005	<0.005	<0.005
7-11 (SAND CREEK)		0.023	0.022	0.017
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.024	<0.005	<0.005
7-2A (ACTIVE,IN ASH)			0.04	
7-3 (INACTIVE,UNDER ASH)		0.033	0.008	<0.005
PERIPHERAL				
7-8		<0.005	<0.005	<0.005
7-7		0.117	0.115	0.133
7-10		<0.005	<0.005	<0.005
DOWNGRADIENT				
7-4 (OLD AREA)		<0.005	<0.005	<0.005
7-6 (ACTIVE AREA)		<0.005	<0.005	<0.005
7-9		<0.005	<0.005	<0.005
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.005	<0.005	<0.005
OTHERS				
SURFACE WATER			<0.005	

PLANT SEVEN
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.0005	<0.0005	<0.0005
7-11 (SAND CREEK)		<0.0005	<0.0005	<0.0005
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.0005	<0.0005	<0.0005
7-2A (ACTIVE,IN ASH)			<0.0025	
7-3 (INACTIVE,UNDER ASH)		<0.0005	<0.0005	<0.0005
PERIPHERAL				
7-8		<0.0005	<0.0005	<0.0005
7-7		<0.0005	<0.0005	<0.0005
7-10		<0.0005	<0.0005	<0.0005
DOWNGRADIENT				
7-4 (OLD AREA)		<0.0005	<0.0005	<0.0005
7-6 (ACTIVE AREA)		<0.0005	<0.0005	<0.0005
7-9		<0.0005	<0.0005	<0.0005
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.0005	<0.0005	<0.0005
OTHERS				
SURFACE WATER			<0.0005	

PLANT SEVEN
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		296	278	291
7-11 (SAND CREEK)		72.3	74.2	70.8
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		428	449	401
7-2A (ACTIVE,IN ASH)			720	
7-3 (INACTIVE,UNDER ASH)		249	269	271
PERIPHERAL				
7-8		426	444	335
7-7		61	60.6	59.4
7-10		481	372	348
DOWNGRADIENT				
7-4 (OLD AREA)		225	247	233
7-6 (ACTIVE AREA)		322	358	344
7-9		301	347	333
BETWEEN ACTIVE/INACTIVE AREA				
7-12		303	326	303
OTHERS				
SURFACE WATER			648	

PLANT SEVEN
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.01	0.03	0.03
7-11 (SAND CREEK)		<0.01	<0.01	0.01
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.01	0.03	0.03
7-2A (ACTIVE,IN ASH)			0.05	
7-3 (INACTIVE,UNDER ASH)		<0.01	0.02	0.02
PERIPHERAL				
7-8		<0.01	0.02	0.02
7-7		<0.01	<0.01	<0.01
7-10		<0.01	0.03	0.02
DOWNGRADIENT				
7-4 (OLD AREA)		<0.01	0.03	0.02
7-6 (ACTIVE AREA)		<0.01	0.02	0.02
7-9		<0.01	0.03	0.02
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.01	0.03	0.02
OTHERS				
SURFACE WATER			0.04	

PLANT SEVEN
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.05	<0.05	<0.05
7-11 (SAND CREEK)		<0.05	<0.05	<0.05
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)		<0.05	<0.05	<0.05
7-2A (ACTIVE, IN ASH)			0.35	
7-3 (INACTIVE, UNDER ASH)		<0.05	<0.05	<0.05
PERIPHERAL				
7-8		<0.05	0.07	<0.05
7-7		<0.05	<0.05	<0.05
7-10		<0.05	0.19	<0.05
DOWNGRADIENT				
7-4 (OLD AREA)		<0.05	0.09	<0.05
7-6 (ACTIVE AREA)		<0.05	<0.05	<0.05
7-9		<0.05	<0.05	<0.05
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.05	0.19	<0.05
OTHERS				
SURFACE WATER			<0.05	

PLANT SEVEN
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.01	<0.01	0.03
7-11 (SAND CREEK)		<0.01	<0.01	<0.01
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)		<0.01	<0.01	0.03
7-2A (ACTIVE, IN ASH)			<0.05	
7-3 (INACTIVE, UNDER ASH)		<0.01	<0.01	0.02
PERIPHERAL				
7-8		<0.01	<0.01	<0.01
7-7		<0.01	<0.01	0.02
7-10		<0.01	0.02	<0.01
DOWNGRADIENT				
7-4 (OLD AREA)		<0.01	<0.01	0.03
7-6 (ACTIVE AREA)		<0.01	<0.01	0.04
7-9		<0.01	<0.01	0.03
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.01	<0.01	0.02
OTHERS				
SURFACE WATER			<0.01	

PLANT SEVEN
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.008	0.017	<0.008
7-11 (SAND CREEK)		<0.008	<0.008	<0.008
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.008	<0.008	<0.008
7-2A (ACTIVE,IN ASH)			0.05	
7-3 (INACTIVE,UNDER ASH)		<0.008	<0.008	<0.008
PERIPHERAL				
7-8		0.011	0.009	0.009
7-7		0.01	<0.008	<0.008
7-10		0.011	0.016	<0.008
DOWNGRADIENT				
7-4 (OLD AREA)		0.027	<0.008	<0.008
7-6 (ACTIVE AREA)		0.057	<0.008	0.009
7-9		0.021	<0.008	<0.008
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.008	0.016	<0.008
OTHERS				
SURFACE WATER			<0.008	

PLANT SEVEN
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		0.07	0.06	0.1
7-11 (SAND CREEK)		0.03	<0.01	0.03
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.03	0.08	0.11
7-2A (ACTIVE,IN ASH)			0.25	
7-3 (INACTIVE,UNDER ASH)		<0.01	0.07	0.08
PERIPHERAL				
7-8		0.07	0.08	0.08
7-7		0.03	<0.01	0.01
7-10		0.07	0.1	0.08
DOWNGRADIENT				
7-4 (OLD AREA)		0.03	0.08	0.07
7-6 (ACTIVE AREA)		0.07	0.08	0.11
7-9		0.05	0.08	0.07
BETWEEN ACTIVE/INACTIVE AREA				
7-12		0.07	0.1	0.07
OTHERS				
SURFACE WATER			0.1	

PLANT SEVEN
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	52081	70681	102081	51882
BACKGROUND				
7-5		11	11	11
7-11 (SAND CREEK)		6	7	4
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		9	10	7
7-2A (ACTIVE,IN ASH)			45	
7-3 (INACTIVE,UNDER ASH)		8	9	8
PERIPHERAL				
7-8		9	11	6
7-7		3	3	2
7-10		8	11	6
DOWNGRADIENT				
7-4 (OLD AREA)		10	11	9
7-6 (ACTIVE AREA)		6	7	6
7-9		8	11	8
BETWEEN ACTIVE/INACTIVE AREA				
7-12		9	11	9
OTHERS				
SURFACE WATER			25	

PLANT SEVEN
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		76.7	79.2	72.1
7-11 (SAND CREEK)		20.5	18.4	18.8
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		65.9	65.5	54.4
7-2A (ACTIVE,IN ASH)			59.5	
7-3 (INACTIVE,UNDER ASH)		53.8	73.4	68.1
PERIPHERAL				
7-8		52.8	51.6	34.2
7-7		21.4	18.3	20.4
7-10		58.4	48.5	39.4
DOWNGRADIENT				
7-4 (OLD AREA)		61.4	74.1	64.7
7-6 (ACTIVE AREA)		101	120	98.1
7-9		85.6	102	87.9
BETWEEN ACTIVE/INACTIVE AREA				
7-12		76	84.3	72.2
OTHERS				
SURFACE WATER			197	

PLANT SEVEN
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51682
BACKGROUND				
7-5		0.23	0.04	0.02
7-11 (SAND CREEK)		0.01	<0.01	<0.01
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.42	0.07	0.1
7-2A (ACTIVE,IN ASH)			0.05	
7-3 (INACTIVE,UNDER ASH)		<0.01	0.01	<0.01
PERIPHERAL				
7-8		0.08	0.05	0.02
7-7		0.08	0.05	<0.01
7-10		0.09	0.07	0.05
DOWNGRADIENT				
7-4 (OLD AREA)		0.16	0.02	<0.01
7-6 (ACTIVE AREA)		0.01	<0.01	<0.01
7-9		<0.01	<0.01	<0.01
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.01	<0.01	<0.01
OTHERS				
SURFACE WATER			0.02	

PLANT SEVEN
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.3	<0.3	<0.3
7-11 (SAND CREEK)		<0.3	<0.3	<0.3
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.3	<0.3	<0.3
7-2A (ACTIVE,IN ASH)			<1.5	
7-3 (INACTIVE,UNDER ASH)		<0.3	<0.3	<0.3
PERIPHERAL				
7-8		<0.3	<0.3	<0.3
7-7		<0.3	<0.3	<0.3
7-10		<0.3	<0.3	<0.3
DOWNGRADIENT				
7-4 (OLD AREA)		<0.3	<0.3	<0.3
7-6 (ACTIVE AREA)		<0.3	<0.3	<0.3
7-9		<0.3	<0.3	<0.3
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.3	<0.3	<0.3
OTHERS				
SURFACE WATER			<0.3	

PLANT SEVEN
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		178	178	182
7-11 (SAND CREEK)		16	16	14
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		113	105	97
7-2A (ACTIVE,IN ASH)			105	
7-3 (INACTIVE,UNDER ASH)		151	160	154
PERIPHERAL				
7-8		94	91	78
7-7		8	6	6
7-10		123	94	92
DOWNGRADIENT				
7-4 (OLD AREA)		180	176	184
7-6 (ACTIVE AREA)		170	157	153
7-9		158	164	157
BETWEEN ACTIVE/INACTIVE AREA				
7-12		148	135	150
OTHERS				
SURFACE WATER			284	

PLANT SEVEN
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.05	0.13	<0.05
7-11 (SAND CREEK)		<0.05	<0.05	<0.05
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)		0.05	0.13	0.07
7-2A (ACTIVE, IN ASH)			<0.25	
7-3 (INACTIVE, UNDER ASH)		<0.05	0.12	<0.05
PERIPHERAL				
7-8		<0.05	0.14	0.08
7-7		<0.05	0.05	<0.05
7-10		<0.05	0.14	0.08
DOWNGRADIENT				
7-4 (OLD AREA)		<0.05	0.14	0.05
7-6 (ACTIVE AREA)		<0.05	0.14	0.12
7-9		<0.05	0.15	0.08
BETWEEN ACTIVE/INACTIVE AREA				
7-12		0.06	0.14	0.11
OTHERS				
SURFACE WATER			0.15	

PLANT SEVEN
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.6	1.4	1.6
7-11 (SAND CREEK)		<0.6	<0.6	<0.6
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.6	1	2.1
7-2A (ACTIVE,IN ASH)			<3	
7-3 (INACTIVE,UNDER ASH)		<0.6	1	1.3
PERIPHERAL				
7-8		0.6	0.9	1.6
7-7		<0.6	<0.6	0.6
7-10		0.6	0.9	1.8
DOWNGRADIENT				
7-4 (OLD AREA)		<0.6	1	1.1
7-6 (ACTIVE AREA)		<0.6	1	1.6
7-9		<0.6	1.1	1.8
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.6	1	1.8
OTHERS				
SURFACE WATER			1.3	

PLANT SEVEN
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.05	<0.05	<0.05
7-11 (SAND CREEK)		<0.05	<0.05	<0.05
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.05	<0.05	<0.05
7-2A (ACTIVE,IN ASH)			<0.25	
7-3 (INACTIVE,UNDER ASH)		<0.05	<0.05	<0.05
PERIPHERAL				
7-8		<0.05	<0.05	<0.05
7-7		<0.05	<0.05	<0.05
7-10		<0.05	<0.05	<0.05
DOWNGRADIENT				
7-4 (OLD AREA)		<0.05	<0.05	<0.05
7-6 (ACTIVE AREA)		<0.05	<0.05	<0.05
7-9		<0.05	<0.05	<0.05
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.05	<0.05	<0.05
OTHERS				
SURFACE WATER			<0.05	

PLANT SEVEN
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		6.45	6.35	6.07
7-11 (SAND CREEK)		5.31	5.07	4.81
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		5.45	5.82	4.69
7-2A (ACTIVE,IN ASH)			0.8	
7-3 (INACTIVE,UNDER ASH)		5.57	6.01	5.49
PERIPHERAL				
7-8		5.32	6.4	4.29
7-7		6.28	6.52	5.37
7-10		5.5	6.41	4.24
DOWNGRADIENT				
7-4 (OLD AREA)		6.23	6.55	6
7-6 (ACTIVE AREA)		5.68	5.89	6.32
7-9		6.43	7.74	6.42
BETWEEN ACTIVE/INACTIVE AREA				
7-12		5.93	6.52	6.58
OTHERS				
SURFACE WATER			0.07	

PLANT SEVEN
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		2.06	1.67	1.92
7-11 (SAND CREEK)		0.447	0.41	0.4
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		3.33	2.77	2.95
7-2A (ACTIVE,IN ASH)			5.6	
7-3 (INACTIVE,UNDER ASH)		2.49	2.02	2.15
PERIPHERAL				
7-8		3.55	3.06	2.63
7-7		1	0.952	0.993
7-10		4.13	2.77	2.9
DOWNGRADIENT				
7-4 (OLD AREA)		2.26	2.02	2.13
7-6 (ACTIVE AREA)		3.15	2.73	3.09
7-9		2.6	2.45	2.36
BETWEEN ACTIVE/INACTIVE AREA				
7-12		2.16	1.93	2.05
OTHERS				
SURFACE WATER			4.1	

PLANT SEVEN
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		0.05	<0.01	<0.01
7-11 (SAND CREEK)		<0.01	<0.01	<0.01
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.01	<0.01	0.02
7-2A (ACTIVE,IN ASH)			0.15	
7-3 (INACTIVE,UNDER ASH)		<0.01	<0.01	0.03
PERIPHERAL				
7-8		0.05	<0.01	0.02
7-7		0.07	<0.01	<0.01
7-10		0.04	<0.01	<0.01
DOWNGRADIENT				
7-4 (OLD AREA)		0.03	<0.01	0.03
7-6 (ACTIVE AREA)		0.05	<0.01	<0.01
7-9		0.02	<0.01	0.02
BETWEEN ACTIVE/INACTIVE AREA				
7-12		0.09	0.03	<0.01
OTHERS				
SURFACE WATER			<0.01	

Note: Program blanks data has shown levels between 0.01 and 0.05 ppm suggesting that any data in this range is not likely to be real

PLANT SEVEN
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.005	0.008	<0.005
7-11 (SAND CREEK)		<0.005	<0.005	<0.005
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.005	<0.005	<0.005
7-2A (ACTIVE,IN ASH)			<0.025	
7-3 (INACTIVE,UNDER ASH)		<0.005	<0.005	<0.005
PERIPHERAL				
7-8		<0.005	<0.005	<0.005
7-7		<0.005	<0.005	<0.005
7-10		<0.005	0.007	<0.005
DOWNGRADIENT				
7-4 (OLD AREA)		<0.005	0.008	<0.005
7-6 (ACTIVE AREA)		<0.005	0.006	<0.005
7-9		<0.005	0.006	<0.005
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.005	0.008	<0.005
OTHERS				
SURFACE WATER			<0.005	

Note: Data for trip 2 may not be real since the field blank for that trip contained 0.009 ppm titanium

PLANT SEVEN
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		0.055	<0.005	<0.005
7-11 (SAND CREEK)		0.011	<0.005	<0.005
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.039	<0.005	0.014
7-2A (ACTIVE,IN ASH)			0.06	
7-3 (INACTIVE,UNDER ASH)		0.063	<0.005	0.019
PERIPHERAL				
7-8		0.033	<0.005	0.011
7-7		0.021	<0.005	<0.005
7-10		0.04	<0.005	0.007
DOWNGRADIENT				
7-4 (OLD AREA)		0.04	<0.005	<0.005
7-6 (ACTIVE AREA)		0.074	<0.005	0.014
7-9		0.059	<0.005	0.018
BETWEEN ACTIVE/INACTIVE AREA				
7-12		0.061	<0.005	0.012
OTHERS				
SURFACE WATER			<0.005	

PLANT SEVEN
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.05	0.09	0.05
7-11 (SAND CREEK)		<0.05	<0.05	<0.05
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.05	0.08	<0.05
7-2A (ACTIVE,IN ASH)			0.5	
7-3 (INACTIVE,UNDER ASH)		<0.05	0.08	<0.05
PERIPHERAL				
7-8		<0.05	0.08	0.08
7-7		<0.05	<0.05	<0.05
7-10		<0.05	0.07	0.07
DOWNGRADIENT				
7-4 (OLD AREA)		<0.05	0.07	0.07
7-6 (ACTIVE AREA)		<0.05	0.08	0.07
7-9		<0.05	0.08	0.07
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.05	0.07	0.09
OTHERS				
SURFACE WATER			0.14	

PLANT SEVEN
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.05	<0.05	<0.05
7-11 (SAND CREEK)		<0.05	<0.05	<0.05
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		<0.05	<0.05	<0.05
7-2A (ACTIVE,IN ASH)			<0.25	
7-3 (INACTIVE,UNDER ASH)		<0.05	<0.05	<0.05
PERIPHERAL				
7-8		<0.05	<0.05	<0.05
7-7		<0.05	<0.05	<0.05
7-10		<0.05	<0.05	<0.05
DOWNGRADIENT				
7-4 (OLD AREA)		<0.05	<0.05	<0.05
7-6 (ACTIVE AREA)		<0.05	<0.05	<0.05
7-9		<0.05	<0.05	<0.05
BETWEEN ACTIVE/INACTIVE AREA				
7-12		<0.05	<0.05	<0.05
OTHERS				
SURFACE WATER			<0.05	

PLANT SEVEN
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		1.4		
7-11 (SAND CREEK)		<0.5	<0.5	
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.7	0.5	
7-2A (ACTIVE,IN ASH)				
7-3 (INACTIVE,UNDER ASH)		0.5	1	
PERIPHERAL				
7-8		0.6	0.6	
7-7		<0.5		
7-10				
DOWNGRADIENT				
7-4 (OLD AREA)		0.6		
7-6 (ACTIVE AREA)		0.7		
7-9				
BETWEEN ACTIVE/INACTIVE AREA				
7-12				
OTHERS				
SURFACE WATER				

PLANT SEVEN
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		<0.4		
7-11 (SAND CREEK)		4.2	5.7	
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		0.8	1.7	
7-2A (ACTIVE,IN ASH)				
7-3 (INACTIVE,UNDER ASH)		1.2	0.7	
PERIPHERAL				
7-8		2.3	2.3	
7-7		1.3		
7-10				
DOWNGRADIENT				
7-4 (OLD AREA)		<0.4		
7-6 (ACTIVE AREA)		2.1		
7-9				
BETWEEN ACTIVE/INACTIVE AREA				
7-12				
OTHERS				
SURFACE WATER				

PLANT SEVEN
CONCENTRATION OF 38 PH FIELD -

SAMPLING POINT DESIGNATION	TRIPS			
	52081	70681	102081	51882
BACKGROUND				
7-5		7.2	7.5	7.5
7-11 (SAND CREEK)		7.7	7.2	7.7
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		7.85	7.6	7.7
7-2A (ACTIVE,IN ASH)				
7-3 (INACTIVE,UNDER ASH)		8.4	8	7.8
PERIPHERAL				
7-8		7.2	7.4	7.8
7-7		7.7	7.7	7.9
7-10		7	7.3	7.5
DOWNGRADIENT				
7-4 (OLD AREA)		7.2	7.4	7.8
7-6 (ACTIVE AREA)		7.35	7.3	7.5
7-9		7.47	7.4	7.6
BETWEEN ACTIVE/INACTIVE AREA				
7-12		7.6	7.4	7.7
OTHERS				
SURFACE WATER				

PLANT SEVEN
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS			
	52081	70681	102081	51882
BACKGROUND				
7-5		2400	2300	2400
7-11 (SAND CREEK)		650	575	560
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		2200	2450	2200
7-2A (ACTIVE,IN ASH)				
7-3 (INACTIVE,UNDER ASH)		2000	2000	2000
PERIPHERAL				
7-8		2400	2100	2000
7-7		500	525	520
7-10		2450	2000	2000
DOWNGRADIENT				
7-4 (OLD AREA)		2050	1900	2000
7-6 (ACTIVE AREA)		2550	2400	2225
7-9		2450	2300	2500
BETWEEN ACTIVE/INACTIVE AREA				
7-12		2200	2000	2075
OTHERS				
SURFACE WATER				

PLANT SEVEN
CONCENTRATION OF 41 GROUNDWATER LEVEL FT (Measured to top of casing)

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		53.9	54.5	55.2
7-11 (SAND CREEK)		21.2	21.8	23.2
WASTE AREA				
7-2 (ACTIVE,UNDER ASH)		51.2	51.7	52
7-2A (ACTIVE,IN ASH)			50.5	
7-3 (INACTIVE,UNDER ASH)		28.3	28.7	35
PERIPHERAL				
7-8		8.8	8.8	10.2
7-7		34.3	35.2	34.6
7-10		4.4	4.7	5.4
DOWNGRADIENT				
7-4 (OLD AREA)		8.5	8.8	9.2
7-6 (ACTIVE AREA)		20.6	20.7	21.3
7-9		12.3	11.6	12.2
BETWEEN ACTIVE/INACTIVE AREA				
7-12		13.2	13.7	14.5
OTHERS				
SURFACE WATER				

SUMMARY OF GROUNDWATER LEVELS - DAVE JOHNSTON

(in feet from top of casing)*

ADL Wells	TOC	Date 5/20/81	7/6/81	10/20/81	5/18/82
7-2	4989.0	50.8(4938.2)	51.2(4937.8)	51.7(4937.3)	52.0(4937.0)
7-2A	4982.9	50.2(4936.8)	-	50.5(4938.4)	-
7-3	4965.0	28.2(4936.8)	28.3(4936.7)	28.7(4936.3)	35.0(4930.0)
7-4	4939.7	8.2(4931.5)	8.5(4931.2)	8.8(4930.9)	9.2(4930.5)
7-5	4991.0	54.0(4937.8)	53.8(4938.0)	54.5(4937.3	55.2(4936.6)
7-6	4951.0	20.4(4930.6)	20.6(4930.4)	20.7(4930.3)	21.3(4929.7)
7-7	4973.6	34.2(4939.4)	34.3(4939.3)	35.2(4938.4)	34.6(4939.0)
7-8	4948.9	8.0(4940.9)	8.8(4940.1)	8.8(4940.1)	10.2(4938.7)
7-9	4941.0	11.3(4929.7)	12.3(4928.7)	11.6(4929.4)	12.2(4928.8)
7-10	4942.1	2.8(4939.9)	4.4(4937.7)	4.7(4938.0)	5.4(4936.7)
7-11	4961.8	21.0(4940.8)	21.2(4940.6)	21.8(4940.0)	23.2(4938.6)
7-12	4951.1	13.1(4938.0)	13.2(4937.0)	13.7(4937.4)	14.5(4936.6)
Staff Gauge**	-	- (4921.7)			

*Data in parenthesis are water levels corrected to mean sea level.

**North Platte River

TOC = Top of casing (elevation in feet relative to mean sea level).

PLANT SEVEN
CONCENTRATION OF 42 DISSOLVED OXYGEN PPM

SAMPLING POINT DESIGNATION	TRIPS 52081	70681	102081	51882
BACKGROUND				
7-5		3.9	4.5	1.2-1.8
7-11 (SAND CREEK)		4.75	AP	0.6-2.6
WASTE AREA				
7-2 (ACTIVE, UNDER ASH)		2.3	2.3	0.3
7-2A (ACTIVE, IN ASH)			AP	
7-3 (INACTIVE, UNDER ASH)		5.1	3.6	2.5
PERIPHERAL				
7-8		2.1	AP	0.2
7-7		2.85	1.8-2.8	2.4-4.4
7-10		4.2	AP	0.9
DOWNGRADIENT				
7-4 (OLD AREA)		4.5	AP	0.5-0.9
7-6 (ACTIVE AREA)		1.1	AP	1.3-2.5
7-9		4.7	AP	0.9
BETWEEN ACTIVE/INACTIVE AREA				
7-12		5.2	AP	1.2
OTHERS				
SURFACE WATER				

(AP= problems encountered with D.O. meter)

PLANT SEVEN

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	4001
7-1 S5 (15-15.5 FT)	4004
7-2 S3 (7.5-8.5 FT)	4016
7-2 S8 (37-38 FT)	4021
7-3 S5 (9.5-11.5 FT)	4030
7-3 S7 (14.5-16.5)	4031
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	4051
7-5 S23 (BACKGROUND,49-51 FT)	4061
7-1 U3 (LEVEL 1,24-26.5 FT)	4102
7-1 U3 (LEVEL 3,24-26.5 FT)	<1039
7-1 S7 (27.5-28.5 FT)	4006

PLANT SEVEN
SOLID CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	<0.5
7-1 S5 (15-15.5 FT)	<0.5
7-2 S3 (7.5-8.5 FT)	<0.5
7-2 S8 (37-38 FT)	<0.5
7-3 S5 (9.5-11.5 FT)	<0.5
7-3 S7 (14.5-16.5)	<0.5
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	<0.5
7-5 S23 (BACKGROUND,49-51 FT)	<0.5
7-1 U3 (LEVEL 1,24-26.5 FT)	<0.5
7-1 U3 (LEVEL 3,24-26.5 FT)	<0.5
7-1 S7 (27.5-28.5 FT)	<0.5

PLANT SEVEN
SOLID CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	90100
7-1 S5 (15-15.5 FT)	107000
7-2 S3 (7.5-8.5 FT)	106000
7-2 S8 (37-38 FT)	96100
7-3 S5 (9.5-11.5 FT)	101000
7-3 S7 (14.5-16.5)	111000
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	38800
7-5 S23 (BACKGROUND,49-51 FT)	48700
7-1 U3 (LEVEL 1,24-26.5 FT)	32300
7-1 U3 (LEVEL 3,24-26.5 FT)	33600
7-1 S7 (27.5-28.5 FT)	31900

PLANT SEVEN
SOLID CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	2.67
7-1 S5 (15-15.5 FT)	2.18
7-2 S3 (7.5-8.5 FT)	2.53
7-2 S8 (37-38 FT)	2.63
7-3 S5 (9.5-11.5 FT)	1.99
7-3 S7 (14.5-16.5)	2.46
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	1.88
7-5 S23 (BACKGROUND,49-51 FT)	0.97
7-1 U3 (LEVEL 1,24-26.5 FT)	0.67
7-1 U3 (LEVEL 3,24-26.5 FT)	0.67
7-1 S7 (27.5-28.5 FT)	0.72

PLANT SEVEN
SOLID CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	155000
7-1 S5 (15-15.5 FT)	126000
7-2 S3 (7.5-8.5 FT)	136000
7-2 S8 (37-38 FT)	167000
7-3 S5 (9.5-11.5 FT)	122000
7-3 S7 (14.5-16.5)	98400
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	3350
7-5 S23 (BACKGROUND,49-51 FT)	6000
7-1 U3 (LEVEL 1,24-26.5 FT)	4020
7-1 U3 (LEVEL 3,24-26.5 FT)	5510
7-1 S7 (27.5-28.5 FT)	4250

PLANT SEVEN
SOLID CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	16.4
7-1 S5 (15-15.5 FT)	15.5
7-2 S3 (7.5-8.5 FT)	17.1
7-2 S8 (37-38 FT)	17.2
7-3 S5 (9.5-11.5 FT)	14.4
7-3 S7 (14.5-16.5)	14.4
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	14.4
7-5 S23 (BACKGROUND,49-51 FT)	3.7
7-1 U3 (LEVEL 1,24-26.5 FT)	3.4
7-1 U3 (LEVEL 3,24-26.5 FT)	2.8
7-1 S7 (27.5-28.5 FT)	2.7

Data not accepted and are shown for information only
Recovery of Cd in standard was 1470% at 1.45 ppm.

PLANT SEVEN
SOLID CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	19
7-1 S5 (15-15.5 FT)	23
7-2 S3 (7.5-8.5 FT)	21
7-2 S8 (37-38 FT)	24
7-3 S5 (9.5-11.5 FT)	16
7-3 S7 (14.5-16.5)	16
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	<5
7-5 S23 (BACKGROUND,49-51 FT)	<5
7-1 U3 (LEVEL 1,24-26.5 FT)	<5
7-1 U3 (LEVEL 3,24-26.5 FT)	<5
7-1 S7 (27.5-28.5 FT)	<5

PLANT SEVEN
SOLID CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	63.4
7-1 S5 (15-15.5 FT)	77.5
7-2 S3 (7.5-8.5 FT)	72
7-2 S8 (37-38 FT)	60.5
7-3 S5 (9.5-11.5 FT)	65.8
7-3 S7 (14.5-16.5)	73.9
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	<0.8
7-5 S23 (BACKGROUND,49-51 FT)	5.7
7-1 U3 (LEVEL 1,24-26.5 FT)	9.9
7-1 U3 (LEVEL 3,24-26.5 FT)	10
7-1 S7 (27.5-28.5 FT)	14.5

PLANT SEVEN
SOLID CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	185
7-1 S5 (15-15.5 FT)	152
7-2 S3 (7.5-8.5 FT)	146
7-2 S8 (37-38 FT)	175
7-3 S5 (9.5-11.5 FT)	128
7-3 S7 (14.5-16.5)	120
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	18
7-5 S23 (BACKGROUND,49-51 FT)	4.5
7-1 U3 (LEVEL 1,24-26.5 FT)	6.2
7-1 U3 (LEVEL 3,24-26.5 FT)	5.9
7-1 S7 (27.5-28.5 FT)	8.2

PLANT SEVEN
SOLID CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	25100
7-1 S5 (15-15.5 FT)	22600
7-2 S3 (7.5-8.5 FT)	24900
7-2 S8 (37-38 FT)	25500
7-3 S5 (9.5-11.5 FT)	20700
7-3 S7 (14.5-16.5)	22300
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	74100
7-5 S23 (BACKGROUND,49-51 FT)	12800
7-1 U3 (LEVEL 1,24-26.5 FT)	10300
7-1 U3 (LEVEL 3,24-26.5 FT)	9660
7-1 S7 (27.5-28.5 FT)	11100

PLANT SEVEN
SOLID CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	9300
7-1 S5 (15-15.5 FT)	12600
7-2 S3 (7.5-8.5 FT)	10500
7-2 S8 (37-38 FT)	9000
7-3 S5 (9.5-11.5 FT)	11600
7-3 S7 (14.5-16.5)	13100
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	25700
7-5 S23 (BACKGROUND,49-51 FT)	29500
7-1 U3 (LEVEL 1,24-26.5 FT)	17600
7-1 U3 (LEVEL 3,24-26.5 FT)	18200
7-1 S7 (27.5-28.5 FT)	17500

PLANT SEVEN
SOLID CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	18200
7-1 S5 (15-15.5 FT)	16500
7-2 S3 (7.5-8.5 FT)	17800
7-2 S8 (37-38 FT)	19700
7-3 S5 (9.5-11.5 FT)	15700
7-3 S7 (14.5-16.5)	15100
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	2570
7-5 S23 (BACKGROUND,49-51 FT)	1370
7-1 U3 (LEVEL 1,24-26.5 FT)	1620
7-1 U3 (LEVEL 3,24-26.5 FT)	1940
7-1 S7 (27.5-28.5 FT)	1960

PLANT SEVEN
SOLID CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	615
7-1 S5 (15-15.5 FT)	809
7-2 S3 (7.5-8.5 FT)	1230
7-2 S8 (37-38 FT)	762
7-3 S5 (9.5-11.5 FT)	672
7-3 S7 (14.5-16.5)	647
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	534
7-5 S23 (BACKGROUND,49-51 FT)	152
7-1 U3 (LEVEL 1,24-26.5 FT)	151
7-1 U3 (LEVEL 3,24-26.5 FT)	144
7-1 S7 (27.5-28.5 FT)	164

PLANT SEVEN
SOLID CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	<30
7-1 S5 (15-15.5 FT)	<30
7-2 S3 (7.5-8.5 FT)	<30
7-2 S8 (37-38 FT)	<30
7-3 S5 (9.5-11.5 FT)	<30
7-3 S7 (14.5-16.5)	<30
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	<30
7-5 S23 (BACKGROUND,49-51 FT)	<30
7-1 U3 (LEVEL 1,24-26.5 FT)	<30
7-1 U3 (LEVEL 3,24-26.5 FT)	<30
7-1 S7 (27.5-28.5 FT)	<30

PLANT SEVEN
SOLID CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	3000
7-1 S5 (15-15.5 FT)	3100
7-2 S3 (7.5-8.5 FT)	4800
7-2 S8 (37-38 FT)	6400
7-3 S5 (9.5-11.5 FT)	2200
7-3 S7 (14.5-16.5)	3700
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	8500
7-5 S23 (BACKGROUND,49-51 FT)	15500
7-1 U3 (LEVEL 1,24-26.5 FT)	8600
7-1 U3 (LEVEL 3,24-26.5 FT)	10700
7-1 S7 (27.5-28.5 FT)	8200

PLANT SEVEN
SOLID CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	51
7-1 S5 (15-15.5 FT)	60
7-2 S3 (7.5-8.5 FT)	63
7-2 S8 (37-38 FT)	63
7-3 S5 (9.5-11.5 FT)	56
7-3 S7 (14.5-16.5)	61
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	144
7-5 S23 (BACKGROUND,49-51 FT)	13
7-1 U3 (LEVEL 1,24-26.5 FT)	13
7-1 U3 (LEVEL 3,24-26.5 FT)	9
7-1 S7 (27.5-28.5 FT)	12

PLANT SEVEN
SOLID CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	1930
7-1 S5 (15-15.5 FT)	1860
7-2 S3 (7.5-8.5 FT)	990
7-2 S8 (37-38 FT)	2300
7-3 S5 (9.5-11.5 FT)	1570
7-3 S7 (14.5-16.5)	1340
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	460
7-5 S23 (BACKGROUND,49-51 FT)	250
7-1 U3 (LEVEL 1,24-26.5 FT)	320
7-1 U3 (LEVEL 3,24-26.5 FT)	260
7-1 S7 (27.5-28.5 FT)	300

PLANT SEVEN
SOLID CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	35
7-1 S5 (15-15.5 FT)	40
7-2 S3 (7.5-8.5 FT)	35
7-2 S8 (37-38 FT)	30
7-3 S5 (9.5-11.5 FT)	30
7-3 S7 (14.5-16.5)	35
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	30
7-5 S23 (BACKGROUND,49-51 FT)	20
7-1 U3 (LEVEL 1,24-26.5 FT)	20
7-1 U3 (LEVEL 3,24-26.5 FT)	15
7-1 S7 (27.5-28.5 FT)	15

PLANT SEVEN
SOLID CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	1210
7-1 S5 (15-15.5 FT)	938
7-2 S3 (7.5-8.5 FT)	815
7-2 S8 (37-38 FT)	1350
7-3 S5 (9.5-11.5 FT)	935
7-3 S7 (14.5-16.5)	720
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	78
7-5 S23 (BACKGROUND,49-51 FT)	144
7-1 U3 (LEVEL 1,24-26.5 FT)	99.8
7-1 U3 (LEVEL 3,24-26.5 FT)	111
7-1 S7 (27.5-28.5 FT)	95.7

PLANT SEVEN
SOLID CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	<1
7-1 S5 (15-15.5 FT)	2
7-2 S3 (7.5-8.5 FT)	5
7-2 S8 (37-38 FT)	<1
7-3 S5 (9.5-11.5 FT)	<1
7-3 S7 (14.5-16.5)	8
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	3
7-5 S23 (BACKGROUND,49-51 FT)	2
7-1 U3 (LEVEL 1,24-26.5 FT)	3
7-1 U3 (LEVEL 3,24-26.5 FT)	8
7-1 S7 (27.5-28.5 FT)	9

PLANT SEVEN
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	7010
7-1 S5 (15-15.5 FT)	7310
7-2 S3 (7.5-8.5 FT)	5360
7-2 S8 (37-38 FT)	6470
7-3 S5 (9.5-11.5 FT)	7400
7-3 S7 (14.5-16.5)	7230
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	1120
7-5 S23 (BACKGROUND,49-51 FT)	478
7-1 U3 (LEVEL 1,24-26.5 FT)	1020
7-1 U3 (LEVEL 3,24-26.5 FT)	1250
7-1 S7 (27.5-28.5 FT)	1200

PLANT SEVEN
SOLID CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	214
7-1 S5 (15-15.5 FT)	233
7-2 S3 (7.5-8.5 FT)	233
7-2 S8 (37-38 FT)	218
7-3 S5 (9.5-11.5 FT)	214
7-3 S7 (14.5-16.5)	219
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	77.9
7-5 S23 (BACKGROUND,49-51 FT)	22.4
7-1 U3 (LEVEL 1,24-26.5 FT)	31.1
7-1 U3 (LEVEL 3,24-26.5 FT)	29.9
7-1 S7 (27.5-28.5 FT)	36.7

PLANT SEVEN
SOLID CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	100
7-1 S5 (15-15.5 FT)	117
7-2 S3 (7.5-8.5 FT)	138
7-2 S8 (37-38 FT)	103
7-3 S5 (9.5-11.5 FT)	80
7-3 S7 (14.5-16.5)	101
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	90
7-5 S23 (BACKGROUND,49-51 FT)	34
7-1 U3 (LEVEL 1,24-26.5 FT)	33
7-1 U3 (LEVEL 3,24-26.5 FT)	33
7-1 S7 (27.5-28.5 FT)	41

PLANT SEVEN
SOLID CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	178
7-1 S5 (15-15.5 FT)	169
7-2 S3 (7.5-8.5 FT)	157
7-2 S8 (37-38 FT)	186
7-3 S5 (9.5-11.5 FT)	165
7-3 S7 (14.5-16.5)	160
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	64
7-5 S23 (BACKGROUND,49-51 FT)	33.1
7-1 U3 (LEVEL 1,24-26.5 FT)	50.4
7-1 U3 (LEVEL 3,24-26.5 FT)	46.2
7-1 S7 (27.5-28.5 FT)	58.7

PLANT SEVEN
SOLID CONCENTRATION OF 43 ARSENIC (SOLID) PPM

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	17.6
7-1 S5 (15-15.5 FT)	2.6
7-2 S3 (7.5-8.5 FT)	15.5
7-2 S8 (37-38 FT)	10.7
7-3 S5 (9.5-11.5 FT)	5.3
7-3 S7 (14.5-16.5)	
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	
7-5 S23 (BACKGROUND,49-51 FT)	
7-1 U3 (LEVEL 1,24-26.5 FT)	
7-1 U3 (LEVEL 3,24-26.5 FT)	
7-1 S7 (27.5-28.5 FT)	

PLANT SEVEN
SOLID CONCENTRATION OF 44 SELENIUM (SOLID) PPM

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE SOLIDS	
7-1 S2 (3-4 FT)	11.3
7-1 S5 (15-15.5 FT)	5.7
7-2 S3 (7.5-8.5 FT)	5.6
7-2 S8 (37-38 FT)	10.3
7-3 S5 (9.5-11.5 FT)	2.4
7-3 S7 (14.5-16.5)	
SOIL SOLIDS	
7-5 S5 (BACKGROUND,8-10 FT)	
7-5 S23 (BACKGROUND,49-51 FT)	
7-1 U3 (LEVEL 1,24-26.5 FT)	
7-1 U3 (LEVEL 3,24-26.5 FT)	
7-1 S7 (27.5-28.5 FT)	

PLANT SEVEN

SAMPLING POINT DESIGNATION	TRIPS	Sample Numbers
WASTE EXTRACTS	52981	
7-1 S2 (3-4 FT)	4001	
7-1 S5 (15-15.5 FT)	4004	
7-2 S3 (7.5-8.5 FT)	4016	
7-2 S8 (37-38 FT)	4021	
7-3 S5 (9.5-11.5 FT)	4030	
7-3 S7 (14.5-16.5)	4031	

PLANT SEVEN
SOLID CONCENTRATION (PARTIAL EXTRACTION) OF 50 FLUORIDE (EXTRACTABLE) ug/g g/gm

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE EXTRACTS	
7-1 S2 (3-4 FT)	9
7-1 S5 (15-15.5 FT)	8.7
7-2 S3 (7.5-8.5 FT)	7.1
7-2 S8 (37-38 FT)	6.5
7-3 S5 (9.5-11.5 FT)	7.3
7-3 S7 (14.5-16.5)	11.7

PLANT SEVEN
SOLID CONCENTRATION (PARTIAL EXTRACTION) OF 51 CHLORIDE (EXTRACTABLE) ug/g

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE EXTRACTS	
7-1 S2 (3-4 FT)	<12
7-1 S5 (15-15.5 FT)	<12
7-2 S3 (7.5-8.5 FT)	<12
7-2 S8 (37-38 FT)	<12
7-3 S5 (9.5-11.5 FT)	<12
7-3 S7 (14.5-16.5)	<12

PLANT SEVEN
SOLID CONCENTRATION (PARTIAL EXTRACTION) OF 52 NITRATE (EXTRACTABLE) ug/g

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE EXTRACTS	
7-1 S2 (3-4 FT)	<12
7-1 S5 (15-15.5 FT)	<12
7-2 S3 (7.5-8.5 FT)	<12
7-2 S8 (37-38 FT)	<12
7-3 S5 (9.5-11.5 FT)	<12
7-3 S7 (14.5-16.5)	<12

PLANT SEVEN
SOLID CONCENTRATION (PARTIAL EXTRACTION) OF 53 SULFATE (EXTRACTABLE) ug/g (ug/L)

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE EXTRACTS	
7-1 S2 (3-4 FT)	840
7-1 S5 (15-15.5 FT)	830
7-2 S3 (7.5-8.5 FT)	1290
7-2 S8 (37-38 FT)	960
7-3 S5 (9.5-11.5 FT)	660
7-3 S7 (14.5-16.5)	620

PLANT SEVEN
SOLID CONCENTRATION (PARTIAL EXTRACTION) OF 54 PHOSPHATE (EXTRACTABLE) ug/g

SAMPLING POINT DESIGNATION	TRIPS 52981
WASTE EXTRACTS	
7-1 S2 (3-4 FT)	<12
7-1 S5 (15-15.5 FT)	<12
7-2 S3 (7.5-8.5 FT)	<12
7-2 S8 (37-38 FT)	<12
7-3 S5 (9.5-11.5 FT)	<12
7-3 S7 (14.5-16.5)	<12

PLANT SEVEN
SOLID CONCENTRATION (PARTIAL EXTRACTION) OF 56 BROMIDE (EXTRACTABLE) ug/g (ppb)

SAMPLING POINT DESIGNATION	TRIPS
	52981
WASTE EXTRACTS	
7-1 S2 (3-4 FT)	<12
7-1 S5 (15-15.5 FT)	<12
7-2 S3 (7.5-8.5 FT)	<12
7-2 S8 (37-38 FT)	<12
7-3 S5 (9.5-11.5 FT)	<12
7-3 S7 (14.5-16.5)	<12

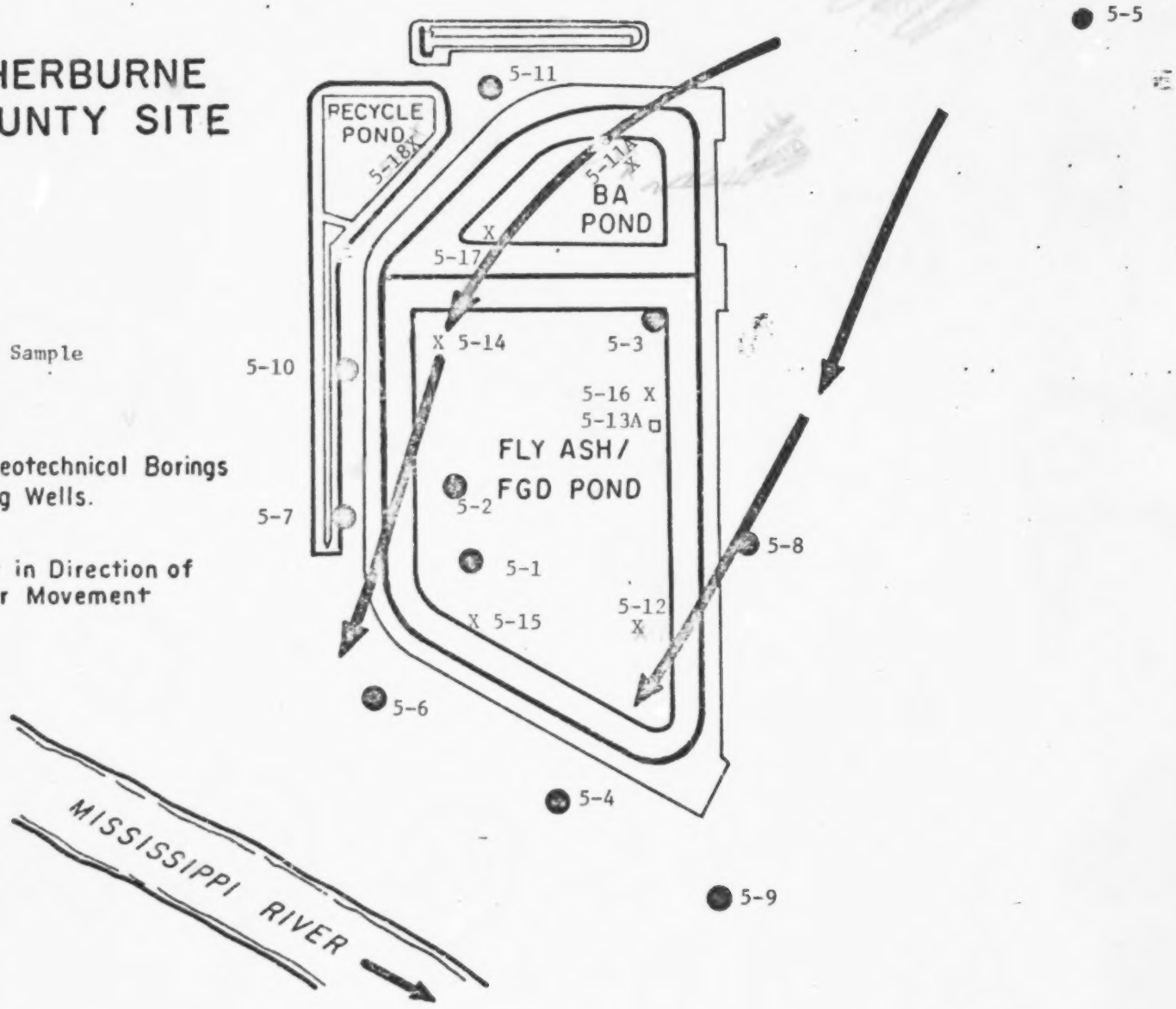
Sherco

SHERBURNE COUNTY SITE

X Surface Water Sample Locations

● Location of Geotechnical Borings and Monitoring Wells.

Arrows Point in Direction of Ground Water Movement



PLANT FIVE
CONCENTRATION OF Sample Numbers PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	61082
BACKGROUND WELLS				
5-5	444	478	1153	1201
5-11	450	489	1165	1211
BOTTOM ASH POND LIQUORS				
5-11A	440			
5-17			1171	1217
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	371			
5-1 S4 (20.5-22.5 FT)	372			
5-1 U3 (24-26.5 FT)	431			
5-2 U1 (6.5-9 FT)	433			
5-2 S2 (10.5-12.5 FT)	378			
5-3 (20 FT)	366			
5-3 S9 (22-24 FT)	385			
5-3 U4 (31-32.5 FT)	436			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		849		
5-13A (NE CORNER)			1178	
5-14 (POND OVERFLOW)			1166	1216
5-15 (S DIKE)			1167	
5-16 (E CORNER DIKE)			1170	
RECYCLE BASIN				
5-18			1172	1223
PERIPHERAL WELLS				
5-7	446	481	1155	1203
5-8	447	483	1159	1204
5-10	449	486	1164	1210
DOWNGRADIENT WELLS				
5-4	443	474	1152	1200
5-6	445	480	1154	1202
5-9	448	484	1163	1209

PLANT FIVE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	847			
5-2 (U4;1.7-3.7 IN)	848			
5-3 (19-25 IN)	839			
5-3 (28-36 IN)	840			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<1186			
5-1 (LIQ;1-2 FT BELOW LINER)	<1188			
5-1 (LIQ;2-4 FT BELOW LINER)	<1191			
5-1 (LIQ;4-5 FT BELOW LINER)	<1193			
5-2 (31 FT WATER)	365			
5-3 (LIQ.;36-38 FT)	<842			
5-3 (LIQ.;38-40 FT)	<843			
5-3 (LIQ.;40-43 FT)	<845			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	1186			
5-1 (EXT2;0-1 FT BELOW LINER)	1187			
5-1 (EXT ;1-2 FT BELOW LINER)	1188			
5-1 (EXT1;2-4 FT BELOW LINER)	1191			
5-1 (EXT2;2-4 FT BELOW LINER)	1192			
5-1 (EXT ;4-5 FT BELOW LINER)	1193			
5-3 (EXT.;36-38 FT)	842			
5-3 (EXT.;38-40 FT)	843			
5-3 (EXT.;40-43 FT)	845			

PLANT FIVE
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<1	<1	0.2	0.1
5-11	<1	<1	0.1	0.1
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			4	<5
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	2			
5-1 S4 (20.5-22.5 FT)	8			
5-1 U3 (24-26.5 FT)	10			
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)	1			
5-3 (20 FT)	<1			
5-3 S9 (22-24 FT)	<1			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<1		
5-13A (NE CORNER)			17.9	
5-14 (POND OVERFLOW)			14.2	12
5-15 (S DIKE)			14.2	
5-16 (E CORNER DIKE)			6.5	
RECYCLE BASIN				
5-18			4	<5
PERIPHERAL WELLS				
5-7	<1	<1	0.2	0.1
5-8	<1	1	<0.1	0.1
5-10	<1	<1	0.1	0.1
DOWNGRADIENT WELLS				
5-4	<1	<1	0.2	0.1
5-6	<1	<1	0.2	0.1
5-9	<1	<1	0.1	0.1

PLANT FIVE
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<1			
5-2 (U4;1.7-3.7 IN)	<1			
5-3 (19-25 IN)	<1			
5-3 (28-36 IN)	<1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	8.24			
5-1 (LIQ;1-2 FT BELOW LINER)	6.64			
5-1 (LIQ;2-4 FT BELOW LINER)	<1.91			
5-1 (LIQ;4-5 FT BELOW LINER)	3.78			
5-2 (31 FT WATER)	<1			
5-3 (LIQ.;36-38 FT)	<22			
5-3 (LIQ.;38-40 FT)	<24.6			
5-3 (LIQ.;40-43 FT)	<15			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.8			
5-1 (EXT2;0-1 FT BELOW LINER)	<0.1			
5-1 (EXT ;1-2 FT BELOW LINER)	0.4			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.1			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.1			
5-1 (EXT ;4-5 FT BELOW LINER)	0.3			
5-3 (EXT.;36-38 FT)	<1			
5-3 (EXT.;38-40 FT)	<1			
5-3 (EXT.;40-43 FT)	<1			

Notes:

EXT = water extract

LIQ = extract concentration x volume of extract ÷ volume of water originally present in the soil

The extract volume to soil mass ratios were approximately 15 mL H_2O with 20 g of soil for both locations 5-1 and 5-3.

The volume of extract ÷ volume in soil ratios are:

5-1 [10.3, 16.6, 19.1, 12.6]
5-3 [22, 24.6, 15]

PLANT FIVE
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	18	27	21	21
5-11	19	2	9	10
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			60	56
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	82			
5-1 S4 (20.5-22.5 FT)	336			
5-1 U3 (24-26.5 FT)	261			
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)	62			
5-3 (20 FT)	123			
5-3 S9 (22-24 FT)	54			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)		466		
5-13A (NE CORNER)			266	
5-14 (POND OVERFLOW)			150	155
5-15 (S DIKE)			160	
5-16 (E CORNER DIKE)			75	
RECYCLE BASIN				
5-18			56	58
PERIPHERAL WELLS				
5-7	14	16	19	21
5-8	15	13	18	17
5-10	24	21	20	20
DOWNGRADIENT WELLS				
5-4	15	19	17	17
5-6	16	20	13	13
5-9	6	3	2.5	3

PLANT FIVE
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	302			
5-2 (U4;1.7-3.7 IN)	165			
5-3 (19-25 IN)	150			
5-3 (28-36 IN)	122			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	246			
5-1 (LIQ;1-2 FT BELOW LINER)	174			
5-1 (LIQ;2-4 FT BELOW LINER)	101			
5-1 (LIQ;4-5 FT BELOW LINER)	44.1			
5-2 (31 FT WATER)	664			
5-3 (LIQ.;36-38 FT)	88			
5-3 (LIQ.;38-40 FT)	98.4			
5-3 (LIQ.;40-43 FT)	45			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	23.9			
5-1 (EXT2;0-1 FT BELOW LINER)	7.2			
5-1 (EXT ;1-2 FT BELOW LINER)	10.5			
5-1 (EXT1;2-4 FT BELOW LINER)	5.3			
5-1 (EXT2;2-4 FT BELOW LINER)	1			
5-1 (EXT ;4-5 FT BELOW LINER)	3.5			
5-3 (EXT.;36-38 FT)	4			
5-3 (EXT.;38-40 FT)	4			
5-3 (EXT.;40-43 FT)	3			

PLANT FIVE
CONCENTRATION OF 3 NITRATE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	40	40	44	46
5-11	1200	4	32	33
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			28	55
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	28			
5-1 S4 (20.5-22.5 FT)	<10			
5-1 U3 (24-26.5 FT)	<10			
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)	30			
5-3 (20 FT)	10			
5-3 S9 (22-24 FT)	20			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)		AP		
5-13A (NE CORNER)			305	
5-14 (POND OVERFLOW)			146	196
5-15 (S DIKE)			155	
5-16 (E CORNER DIKE)			78	
RECYCLE BASIN				
5-18			55	55
PERIPHERAL WELLS				
5-7	40	22	38	40
5-8	2000	23	53	53
5-10	30	30	38	39
DOWNGRADIENT WELLS				
5-4	40	40	45	49
5-6	20	30	36	39
5-9	20	7	17	18

PLANT FIVE
CONCENTRATION OF 3 NITRATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)				
5-3 (28-36 IN)				
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	433			
5-1 (LIQ;1-2 FT BELOW LINER)	370			
5-1 (LIQ;2-4 FT BELOW LINER)	206			
5-1 (LIQ;4-5 FT BELOW LINER)	74.3			
5-2 (31 FT WATER)				
5-3 (LIQ.;36-38 FT)				
5-3 (LIQ.;38-40 FT)				
5-3 (LIQ.;40-43 FT)				
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	42			
5-1 (EXT2;0-1 FT BELOW LINER)	4.2			
5-1 (EXT ;1-2 FT BELOW LINER)	22.3			
5-1 (EXT1;2-4 FT BELOW LINER)	10.8			
5-1 (EXT2;2-4 FT BELOW LINER)	0.6			
5-1 (EXT ;4-5 FT BELOW LINER)	5.9			
5-3 (EXT.;36-38 FT)				
5-3 (EXT.;38-40 FT)				
5-3 (EXT.;40-43 FT)				

PLANT FIVE
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	22	20	14	15
5-11	110	7	37	46
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			2305	2200
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	512			
5-1 S4 (20.5-22.5 FT)	3057			
5-1 U3 (24-26.5 FT)	2420			
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)	207			
5-3 (20 FT)	1600			
5-3 S9 (22-24 FT)	1750			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)		10550		
5-13A (NE CORNER)			7308	
5-14 (POND OVERFLOW)			8367	9900
5-15 (S DIKE)			8367	
5-16 (E CORNER DIKE)			4220	
RECYCLE BASIN				
5-18			2345	2200
PERIPHERAL WELLS				
5-7	70	52	39	41
5-8	35	24	20	20
5-10	52	52	58	44
DOWNGRADIENT WELLS				
5-4	30	28	23	23
5-6	76	59	41	49
5-9	22	16	18	15

PLANT FIVE
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	1786			
5-2 (U4;1.7-3.7 IN)	1800			
5-3 (19-25 IN)	2020			
5-3 (28-36 IN)	1957			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	2750			
5-1 (LIQ;1-2 FT BELOW LINER)	2800			
5-1 (LIQ;2-4 FT BELOW LINER)	1090			
5-1 (LIQ;4-5 FT BELOW LINER)	1100			
5-2 (31 FT WATER)	29000			
5-3 (LIQ.;36-38 FT)	132			
5-3 (LIQ.;38-40 FT)	738			
5-3 (LIQ.;40-43 FT)	930			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	266.7			
5-1 (EXT2;0-1 FT BELOW LINER)	34.3			
5-1 (EXT ;1-2 FT BELOW LINER)	168.7			
5-1 (EXT1;2-4 FT BELOW LINER)	57.1			
5-1 (EXT2;2-4 FT BELOW LINER)	6.7			
5-1 (EXT ;4-5 FT BELOW LINER)	87			
5-3 (EXT.;36-38 FT)	6			
5-3 (EXT.;38-40 FT)	30			
5-3 (EXT.;40-43 FT)	62			

PLANT FIVE
CONCENTRATION OF 5 PHOSPHATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<50	<50	<0.3	<0.3
5-11	<50	<50	<0.3	<0.3
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			<15	<16
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<50			
5-1 S4 (20.5-22.5 FT)	<50			
5-1 U3 (24-26.5 FT)	<50			
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)	<50			
5-3 (20 FT)	<50			
5-3 S9 (22-24 FT)	<50			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)			<30	
5-14 (POND OVERFLOW)			<30	<30
5-15 (S DIKE)			<30	
5-16 (E CORNER DIKE)			<15	
RECYCLE BASIN				
5-18			<15	<16
PERIPHERAL WELLS				
5-7	<50	<50	<0.3	<0.3
5-8	<50	<50	<0.3	<0.3
5-10	<50	<50	<0.3	<0.3
DOWNGRADIENT WELLS				
5-4	<50	<50	<0.3	<0.3
5-6	<50	<50	<0.3	<0.3
5-9	<50	<50	<0.3	<0.3

PLANT FIVE
CONCENTRATION OF 5 PHOSPHATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)				
5-3 (28-36 IN)				
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)				
5-1 (LIQ;1-2 FT BELOW LINER)				
5-1 (LIQ;2-4 FT BELOW LINER)				
5-1 (LIQ;4-5 FT BELOW LINER)				
5-2 (31 FT WATER)				
5-3 (LIQ.;36-38 FT)				
5-3 (LIQ.;38-40 FT)				
5-3 (LIQ.;40-43 FT)				
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)				
5-1 (EXT2;0-1 FT BELOW LINER)				
5-1 (EXT ;1-2 FT BELOW LINER)				
5-1 (EXT1;2-4 FT BELOW LINER)				
5-1 (EXT2;2-4 FT BELOW LINER)				
5-1 (EXT ;4-5 FT BELOW LINER)				
5-3 (EXT.;36-38 FT)				
5-3 (EXT.;38-40 FT)				
5-3 (EXT.;40-43 FT)				

PLANT FIVE
CONCENTRATION OF 6 BROMIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<10	<10		<0.3
5-11	<10	<10		<0.3
BOTTOM ASH POND LIQUORS				
5-11A				
5-17				<16
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<10			
5-1 S4 (20.5-22.5 FT)	<10			
5-1 U3 (24-26.5 FT)	<10			
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)	<10			
5-3 (20 FT)	<10			
5-3 S9 (22-24 FT)	<10			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)				<30
5-15 (S DIKE)				
5-16 (E CORNER DIKE)				
RECYCLE BASIN				
5-18				<16
PERIPHERAL WELLS				
5-7	<10	<10		<0.3
5-8	<10	<10		<0.3
5-10	<10	<10		<0.3
DOWNGRADIENT WELLS				
5-4	<10	<10		<0.3
5-6	<10	<10		<0.3
5-9	<10	<10		<0.3

PLANT FIVE
CONCENTRATION OF 6 BROMIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)				
5-3 (28-36 IN)				
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)				
5-1 (LIQ;1-2 FT BELOW LINER)				
5-1 (LIQ;2-4 FT BELOW LINER)				
5-1 (LIQ;4-5 FT BELOW LINER)				
5-2 (31 FT WATER)				
5-3 (LIQ.;36-38 FT)				
5-3 (LIQ.;38-40 FT)				
5-3 (LIQ.;40-43 FT)				
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)				
5-1 (EXT2;0-1 FT BELOW LINER)				
5-1 (EXT ;1-2 FT BELOW LINER)				
5-1 (EXT1;2-4 FT BELOW LINER)				
5-1 (EXT2;2-4 FT BELOW LINER)				
5-1 (EXT ;4-5 FT BELOW LINER)				
5-3 (EXT.;36-38 FT)				
5-3 (EXT.;38-40 FT)				
5-3 (EXT.;40-43 FT)				

PLANT FIVE
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.005	<0.005	<0.005	<0.005
5-11	<0.005	<0.005	<0.005	<0.005
BOTTOM ASH POND LIQUORS				
5-11A	<0.005			
5-17			<0.005	<0.005
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.005			
5-1 S4 (20.5-22.5 FT)	<0.005			
5-1 U3 (24-26.5 FT)	<0.005			
5-2 U1 (6.5-9 FT)	<0.005			
5-2 S2 (10.5-12.5 FT)	<0.005			
5-3 (20 FT)	<0.005			
5-3 S9 (22-24 FT)	<0.005			
5-3 U4 (31-32.5 FT)	<0.005			
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)			<0.005	
5-14 (POND OVERFLOW)			<0.005	<0.005
5-15 (S DIKE)			<0.005	
5-16 (E CORNER DIKE)			<0.005	
RECYCLE BASIN				
5-18			<0.005	<0.005
PERIPHERAL WELLS				
5-7	<0.005	<0.005	<0.005	<0.005
5-8	<0.005	<0.005	<0.005	<0.005
5-10	<0.005	<0.005	<0.005	<0.005
DOWNGRADIENT WELLS				
5-4	<0.005	<0.005	<0.005	<0.005
5-6	<0.005	<0.005	<0.005	<0.005
5-9	<0.005	<0.005	<0.005	<0.005

PLANT FIVE
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)				
5-3 (28-36 IN)				
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)				
5-1 (LIQ;1-2 FT BELOW LINER)				
5-1 (LIQ;2-4 FT BELOW LINER)				
5-1 (LIQ;4-5 FT BELOW LINER)				
5-2 (31 FT WATER)	<0.005			
5-3 (LIQ.;36-38 FT)				
5-3 (LIQ.;38-40 FT)				
5-3 (LIQ.;40-43 FT)				
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)				
5-1 (EXT2;0-1 FT BELOW LINER)				
5-1 (EXT ;1-2 FT BELOW LINER)				
5-1 (EXT1;2-4 FT BELOW LINER)				
5-1 (EXT2;2-4 FT BELOW LINER)				
5-1 (EXT ;4-5 FT BELOW LINER)				
5-3 (EXT.;36-38 FT)				
5-3 (EXT.;38-40 FT)				
5-3 (EXT.;40-43 FT)				

Notes:

EXT = water extract

LIQ = extract concentration x volume of extract ÷ volume of water originally present in the soil

The extract volume to soil mass ratios were approximately 15 mL H_2O with 20 g of soil for both locations 5-1 and 5-3.

The volume of extract ÷ volume in soil ratios are:

5-1 [10.3, 16.6, 19.1, 12.62]
5-3 [22, 24.6, 15]

PLANT FIVE
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.3	<0.3	<0.3	<0.3
5-11	<0.01	<0.3	<0.3	<0.3
BOTTOM ASH POND LIQUORS				
5-11A	0.74			
5-17			0.33	0.19
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.93			
5-1 S4 (20.5-22.5 FT)	1.98			
5-1 U3 (24-26.5 FT)	1.47			
5-2 U1 (6.5-9 FT)	15			
5-2 S2 (10.5-12.5 FT)	0.94			
5-3 (20 FT)	1.03			
5-3 S9 (22-24 FT)	1.93			
5-3 U4 (31-32.5 FT)	3.06			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.5		
5-13A (NE CORNER)			0.13	
5-14 (POND OVERFLOW)			<0.01	0.03
5-15 (S DIKE)			<0.01	
5-16 (E CORNER DIKE)			<0.01	
RECYCLE BASIN				
5-18			0.57	0.3
PERIPHERAL WELLS				
5-7	<0.01	<0.3	<0.3	<0.3
5-8	<0.3	<0.3	<0.3	<0.3
5-10	<0.3	<0.3	<0.3	<0.3
DOWNGRADIENT WELLS				
5-4	<0.3	<0.3	<0.3	<0.3
5-6	<0.3	<0.3	<0.3	<0.3
5-9	<0.3	<0.3	<0.3	<0.3

PLANT FIVE
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	1.3			
5-2 (U4;1.7-3.7 IN)	6			
5-3 (19-25 IN)	4			
5-3 (28-36 IN)	3			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<31			
5-1 (LIQ;1-2 FT BELOW LINER)	<50			
5-1 (LIQ;2-4 FT BELOW LINER)	<57			
5-1 (LIQ;4-5 FT BELOW LINER)	<38			
5-2 (31 FT WATER)	<0.01			
5-3 (LIQ.;36-38 FT)	<6.6			
5-3 (LIQ.;38-40 FT)	22.1			
5-3 (LIQ.;40-43 FT)	21			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.3			
5-1 (EXT2;0-1 FT BELOW LINER)	0.34			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.3			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.3			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.3			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.3			
5-3 (EXT.;36-38 FT)	<0.3			
5-3 (EXT.;38-40 FT)	0.9			
5-3 (EXT.;40-43 FT)	1.4			

PLANT FIVE
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.04*	0.009	<0.004	0.019
5-11	0.03*	<0.004	<0.004	0.013
BOTTOM ASH POND LIQUORS				
5-11A	30.4			
5-17			19.3	19.3
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	90.3			
5-1 S4 (20.5-22.5 FT)	63.9			
5-1 U3 (24-26.5 FT)	50.3			
5-2 U1 (6.5-9 FT)	63.7			
5-2 S2 (10.5-12.5 FT)	61.5			
5-3 (20 FT)	3.5			
5-3 S9 (22-24 FT)	1.73			
5-3 U4 (31-32.5 FT)	11.1			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		171		
5-13A (NE CORNER)			83.9	
5-14 (POND OVERFLOW)			105	132
5-15 (S DIKE)			103	
5-16 (E CORNER DIKE)			110	
RECYCLE BASIN				
5-18			20.9	19.9
PERIPHERAL WELLS				
5-7	0.334	0.334	0.233	0.326
5-8	<0.004	<0.004	<0.004	0.013
5-10	0.046	0.064	0.059	0.114
DOWNGRADIENT WELLS				
5-4	0.056	0.005	<0.004	0.014
5-6	0.189	0.158	0.113	0.188
5-9	<0.004	<0.004	<0.004	0.006

*Note: These values are in the range of blanks observed for this trip.

PLANT FIVE
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	15.1			
5-2 (U4;1.7-3.7 IN)	29.1			
5-3 (19-25 IN)	16.6			
5-3 (28-36 IN)	10.1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	13.6			
5-1 (LIQ;1-2 FT BELOW LINER)	16.4			
5-1 (LIQ;2-4 FT BELOW LINER)	5.14			
5-1 (LIQ;4-5 FT BELOW LINER)	4.26			
5-2 (31 FT WATER)	281			
5-3 (LIQ.;36-38 FT)	5.37			
5-3 (LIQ.;38-40 FT)	4.55			
5-3 (LIQ.;40-43 FT)	5.7			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	1.32			
5-1 (EXT2;0-1 FT BELOW LINER)	0.464			
5-1 (EXT ;1-2 FT BELOW LINER)	0.989			
5-1 (EXT1;2-4 FT BELOW LINER)	0.269			
5-1 (EXT2;2-4 FT BELOW LINER)	0.227			
5-1 (EXT ;4-5 FT BELOW LINER)	0.338			
5-3 (EXT.;36-38 FT)	0.244			
5-3 (EXT.;38-40 FT)	0.185			
5-3 (EXT.;40-43 FT)	0.38			

PLANT FIVE
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.012	0.018	0.031	0.029
5-11	0.035	0.022	0.035	0.038
BOTTOM ASH POND LIQUORS				
5-11A	<0.005			
5-17			0.101	0.108
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.027			
5-1 S4 (20.5-22.5 FT)	<0.005			
5-1 U3 (24-26.5 FT)	<0.005			
5-2 U1 (6.5-9 FT)	<0.005			
5-2 S2 (10.5-12.5 FT)	0.029			
5-3 (20 FT)	<0.005			
5-3 S9 (22-24 FT)	<0.005			
5-3 U4 (31-32.5 FT)	0.0688			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.15		
5-13A (NE CORNER)			<0.005	
5-14 (POND OVERFLOW)			<0.005	<0.005
5-15 (S DIKE)			<0.005	
5-16 (E CORNER DIKE)			0.042	
RECYCLE BASIN				
5-18			0.101	0.047
PERIPHERAL WELLS				
5-7	0.046	0.033	0.034	0.034
5-8	0.018	0.019	0.038	0.034
5-10	0.027	0.022	0.034	0.032
DOWNGRADIENT WELLS				
5-4	0.011	0.024	0.038	0.037
5-6	0.032	0.022	0.035	0.029
5-9	0.013	0.008	0.02	0.018

PLANT FIVE
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	0.16			
5-2 (U4;1.7-3.7 IN)	<0.25			
5-3 (19-25 IN)	<0.1			
5-3 (28-36 IN)	<0.1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	0.587			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.166			
5-1 (LIQ;2-4 FT BELOW LINER)	0.401			
5-1 (LIQ;4-5 FT BELOW LINER)	0.34			
5-2 (31 FT WATER)	<0.005			
5-3 (LIQ.;36-38 FT)	1.01			
5-3 (LIQ.;38-40 FT)	<0.615			
5-3 (LIQ.;40-43 FT)	<0.75			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.057			
5-1 (EXT2;0-1 FT BELOW LINER)	0.029			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.01			
5-1 (EXT1;2-4 FT BELOW LINER)	0.021			
5-1 (EXT2;2-4 FT BELOW LINER)	0.016			
5-1 (EXT ;4-5 FT BELOW LINER)	0.027			
5-3 (EXT.;36-38 FT)	0.046			
5-3 (EXT.;38-40 FT)	<0.025			
5-3 (EXT.;40-43 FT)	<0.05			

PLANT FIVE
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.0005	<0.0005	<0.0005	<0.0005
5-11	<0.0005	<0.0005	<0.0005	<0.0005
BOTTOM ASH POND LIQUORS				
5-11A	<0.0005			
5-17			<0.0005	<0.0005
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.0005			
5-1 S4 (20.5-22.5 FT)	<0.0005			
5-1 U3 (24-26.5 FT)	<0.0005			
5-2 U1 (6.5-9 FT)	<0.0005			
5-2 S2 (10.5-12.5 FT)	<0.0005			
5-3 (20 FT)	<0.0005			
5-3 S9 (22-24 FT)	<0.0005			
5-3 U4 (31-32.5 FT)	<0.0005			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.005		
5-13A (NE CORNER)			<0.0005	
5-14 (POND OVERFLOW)			<0.0005	<0.0005
5-15 (S DIKE)			<0.0005	
5-16 (E CORNER DIKE)			<0.0005	
RECYCLE BASIN				
5-18			<0.0005	<0.0005
PERIPHERAL WELLS				
5-7	<0.0005	<0.0005	<0.0005	<0.0005
5-8	<0.0005	<0.0005	<0.0005	<0.0005
5-10	<0.0005	<0.0005	<0.0005	<0.0005
DOWNGRADIENT WELLS				
5-4	<0.0005	<0.0005	<0.0005	<0.0005
5-6	<0.0005	<0.0005	<0.0005	<0.0005
5-9	<0.0005	<0.0005	<0.0005	<0.0005

PLANT FIVE
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<0.005			
5-2 (U4;1.7-3.7 IN)	<0.025			
5-3 (19-25 IN)	<0.01			
5-3 (28-36 IN)	<0.01			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<0.00515			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.0166			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.00955			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.0063			
5-2 (31 FT WATER)	0.0203			
5-3 (LIQ.;36-38 FT)	<0.022			
5-3 (LIQ.;38-40 FT)	<0.0615			
5-3 (LIQ.;40-43 FT)	<0.075			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.0005			
5-1 (EXT2;0-1 FT BELOW LINER)	<0.0005			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.001			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.0005			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.0005			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.0005			
5-3 (EXT.;36-38 FT)	<0.001			
5-3 (EXT.;38-40 FT)	<0.0025			
5-3 (EXT.;40-43 FT)	<0.005			

PLANT FIVE
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	59.7	66.9	64.8	66.2
5-11	107	78.8	69.6	78.4
BOTTOM ASH POND LIQUORS				
5-11A	775			
5-17			723	623
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	742			
5-1 S4 (20.5-22.5 FT)	591			
5-1 U3 (24-26.5 FT)	624			
5-2 U1 (6.5-9 FT)	808			
5-2 S2 (10.5-12.5 FT)	947			
5-3 (20 FT)	683			
5-3 S9 (22-24 FT)	639			
5-3 U4 (31-32.5 FT)	625			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		513		
5-13A (NE CORNER)			525	
5-14 (POND OVERFLOW)			566	493
5-15 (S DIKE)			552	
5-16 (E CORNER DIKE)			557	
RECYCLE BASIN				
5-18			623	613
PERIPHERAL WELLS				
5-7	101	87	79.6	81.7
5-8	60.1	60.2	65.7	64.4
5-10	79.4	83.4	79.7	80.7
DOWNGRADIENT WELLS				
5-4	68.9	68.1	73.7	72
5-6	83.1	81.6	75.9	78
5-9	53.1	53.4	51.1	52

PLANT FIVE
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	669			
5-2 (U4;1.7-3.7 IN)	515			
5-3 (19-25 IN)	643			
5-3 (28-36 IN)	625			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	893			
5-1 (LIQ;1-2 FT BELOW LINER)	968			
5-1 (LIQ;2-4 FT BELOW LINER)	533			
5-1 (LIQ;4-5 FT BELOW LINER)	421			
5-2 (31 FT WATER)	508			
5-3 (LIQ.;36-38 FT)	915			
5-3 (LIQ.;38-40 FT)	349			
5-3 (LIQ.;40-43 FT)	130			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	86.7			
5-1 (EXT2;0-1 FT BELOW LINER)	11.2			
5-1 (EXT ;1-2 FT BELOW LINER)	58.3			
5-1 (EXT1;2-4 FT BELOW LINER)	27.9			
5-1 (EXT2;2-4 FT BELOW LINER)	15.2			
5-1 (EXT ;4-5 FT BELOW LINER)	33.4			
5-3 (EXT.;36-38 FT)	41.6			
5-3 (EXT.;38-40 FT)	14.2			
5-3 (EXT.;40-43 FT)	8.7			

PLANT FIVE
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.02	<0.01	<0.01	<0.01
5-11	0.01	<0.01	<0.01	<0.01
BOTTOM ASH POND LIQUORS				
5-11A	0.05			
5-17			0.03	0.03
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.07			
5-1 S4 (20.5-22.5 FT)	0.05			
5-1 U3 (24-26.5 FT)	0.05			
5-2 U1 (6.5-9 FT)	0.07			
5-2 S2 (10.5-12.5 FT)	0.05			
5-3 (20 FT)	0.03			
5-3 S9 (22-24 FT)	0.05			
5-3 U4 (31-32.5 FT)	0.125			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.3		
5-13A (NE CORNER)			0.04	
5-14 (POND OVERFLOW)			0.04	0.05
5-15 (S DIKE)			0.04	
5-16 (E CORNER DIKE)			0.05	
RECYCLE BASIN				
5-18			0.03	0.03
PERIPHERAL WELLS				
5-7	0.02	<0.01	<0.01	0.01
5-8	0.01	<0.01	<0.01	<0.01
5-10	<0.01	<0.01	<0.01	0.01
DOWNGRADIENT WELLS				
5-4	0.02	<0.01	<0.01	<0.01
5-6	0.02	<0.01	<0.01	<0.01
5-9	<0.01	<0.01	<0.01	<0.01

PLANT FIVE
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<0.1			
5-2 (U4;1.7-3.7 IN)	<0.5			
5-3 (19-25 IN)	1.2			
5-3 (28-36 IN)	<0.2			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	0.206			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.332			
5-1 (LIQ;2-4 FT BELOW LINER)	0.191			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.126			
5-2 (31 FT WATER)	0.15			
5-3 (LIQ.;36-38 FT)	1.32			
5-3 (LIQ.;38-40 FT)	<1.23			
5-3 (LIQ.;40-43 FT)	<1.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.02			
5-1 (EXT2;0-1 FT BELOW LINER)	0.01			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.02			
5-1 (EXT1;2-4 FT BELOW LINER)	0.01			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.01			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.01			
5-3 (EXT.;36-38 FT)	0.06			
5-3 (EXT.;38-40 FT)	<0.05			
5-3 (EXT.;40-43 FT)	<0.1			

PLANT FIVE
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.05	<0.05	<0.05	0.06
5-11	<0.05	<0.05	<0.05	<0.05
BOTTOM ASH POND LIQUORS				
5-11A	0.07			
5-17			0.22	0.06
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.05			
5-1 S4 (20.5-22.5 FT)	<0.05			
5-1 U3 (24-26.5 FT)	<0.05			
5-2 U1 (6.5-9 FT)	<0.05			
5-2 S2 (10.5-12.5 FT)	<0.05			
5-3 (20 FT)	<0.05			
5-3 S9 (22-24 FT)	0.06			
5-3 U4 (31-32.5 FT)	<0.05			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.5		
5-13A (NE CORNER)			<0.05	
5-14 (POND OVERFLOW)			0.08	0.1
5-15 (S DIKE)			0.08	
5-16 (E CORNER DIKE)			<0.05	
RECYCLE BASIN				
5-18			0.61	0.11
PERIPHERAL WELLS				
5-7	<0.05	<0.05	<0.05	0.06
5-8	0.05	<0.05	<0.05	0.06
5-10	<0.05	<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
5-4	<0.05	<0.05	<0.05	<0.05
5-6	<0.05	<0.05	<0.05	0.06
5-9	<0.05	<0.05	<0.05	0.06

PLANT FIVE
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	0.7			
5-2 (U4;1.7-3.7 IN)	5			
5-3 (19-25 IN)	2			
5-3 (28-36 IN)	2			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<0.515			
5-1 (LIQ;1-2 FT BELOW LINER)	<1.66			
5-1 (LIQ;2-4 FT BELOW LINER)	1.72			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.63			
5-2 (31 FT WATER)	<0.05			
5-3 (LIQ.;36-38 FT)	<15.4			
5-3 (LIQ.;38-40 FT)	<11.2			
5-3 (LIQ.;40-43 FT)	<12			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.05			
5-1 (EXT2;0-1 FT BELOW LINER)	0.1			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.1			
5-1 (EXT1;2-4 FT BELOW LINER)	0.09			
5-1 (EXT2;2-4 FT BELOW LINER)	0.1			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.05			
5-3 (EXT.;36-38 FT)	<0.7			
5-3 (EXT.;38-40 FT)	<0.7			
5-3 (EXT.;40-43 FT)	<0.8			

Note: Anomolous values of 0.62 - 0.75 ppm were obtained for three blanks out of twenty-one. This leads to questionable validity for the few data points reading above detection limit in this site report.

PLANT FIVE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.02	<0.01	0.02	<0.01
5-11	<0.01	<0.01	0.02	<0.01
BOTTOM ASH POND LIQUORS				
5-11A	<0.01			
5-17			<0.01	0.04
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.01			
5-1 S4 (20.5-22.5 FT)	<0.01			
5-1 U3 (24-26.5 FT)	<0.01			
5-2 U1 (6.5-9 FT)	<0.01			
5-2 S2 (10.5-12.5 FT)	<0.01			
5-3 (20 FT)	<0.01			
5-3 S9 (22-24 FT)	0.01			
5-3 U4 (31-32.5 FT)	<0.01			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.8		
5-13A (NE CORNER)			<0.01	
5-14 (POND OVERFLOW)			<0.01	0.25
5-15 (S DIKE)			<0.01	
5-16 (E CORNER DIKE)			<0.01	
RECYCLE BASIN				
5-18			<0.01	0.05
PERIPHERAL WELLS				
5-7	<0.01	<0.01	0.02	<0.01
5-8	0.01	<0.01	0.02	<0.01
5-10	<0.01	<0.01	0.02	<0.01
DOWNGRADIENT WELLS				
5-4	<0.01	<0.01	0.02	<0.01
5-6	<0.01	<0.01	0.02	<0.01
5-9	0.06	<0.01	0.03	<0.01

PLANT FIVE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	0.2			
5-2 (U4;1.7-3.7 IN)	<0.5			
5-3 (19-25 IN)	0.2			
5-3 (28-36 IN)	<0.2			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	0.206			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.332			
5-1 (LIQ;2-4 FT BELOW LINER)	0.382			
5-1 (LIQ;4-5 FT BELOW LINER)	0.378			
5-2 (31 FT WATER)	<0.01			
5-3 (LIQ.;36-38 FT)	<0.44			
5-3 (LIQ.;38-40 FT)	<1.23			
5-3 (LIQ.;40-43 FT)	<1.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.02			
5-1 (EXT2;0-1 FT BELOW LINER)	0.02			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.02			
5-1 (EXT1;2-4 FT BELOW LINER)	0.02			
5-1 (EXT2;2-4 FT BELOW LINER)	0.02			
5-1 (EXT ;4-5 FT BELOW LINER)	0.03			
5-3 (EXT.;36-38 FT)	<0.02			
5-3 (EXT.;38-40 FT)	<0.05			
5-3 (EXT.;40-43 FT)	<0.1			

PLANT FIVE
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.008	<0.008	<0.008	0.009
5-11	<0.008	<0.008	<0.008	<0.008
BOTTOM ASH POND LIQUORS				
5-11A	0.02			
5-17			0.03	0.014
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.251			
5-1 S4 (20.5-22.5 FT)	0.032			
5-1 U3 (24-26.5 FT)	0.021			
5-2 U1 (6.5-9 FT)	0.121			
5-2 S2 (10.5-12.5 FT)	0.046			
5-3 (20 FT)	0.008			
5-3 S9 (22-24 FT)	0.035			
5-3 U4 (31-32.5 FT)	0.075			
POND SURFACE LIQUORS		AP		
5-12 (SE CORNER)			0.022	
5-13A (NE CORNER)			0.018	0.027
5-14 (POND OVERFLOW)			0.018	
5-15 (S DIKE)			0.024	
5-16 (E CORNER DIKE)				
RECYCLE BASIN				
5-18			0.063	0.022
PERIPHERAL WELLS				
5-7	0.009	<0.008	<0.008	<0.008
5-8	<0.008	<0.008	<0.008	<0.008
5-10	<0.008	<0.008	<0.008	<0.008
DOWNGRADIENT WELLS				
5-4	<0.008	<0.008	<0.008	<0.008
5-6	<0.008	<0.008	<0.008	<0.008
5-9	<0.008	<0.008	<0.008	<0.008

PLANT FIVE
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	AP			
5-2 (U4;1.7-3.7 IN)	AP			
5-3 (19-25 IN)	AP			
5-3 (28-36 IN)	AP			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	23.7			
5-1 (LIQ;1-2 FT BELOW LINER)	12.3			
5-1 (LIQ;2-4 FT BELOW LINER)	0.248			
5-1 (LIQ;4-5 FT BELOW LINER)	0.365			
5-2 (31 FT WATER)	0.039			
5-3 (LIQ.;36-38 FT)	2.64			
5-3 (LIQ.;38-40 FT)	4.92			
5-3 (LIQ.;40-43 FT)	4.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	2.3			
5-1 (EXT2;0-1 FT BELOW LINER)	1.74			
5-1 (EXT ;1-2 FT BELOW LINER)	0.74			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.008			
5-1 (EXT2;2-4 FT BELOW LINER)	0.017			
5-1 (EXT ;4-5 FT BELOW LINER)	0.018			
5-3 (EXT.;36-38 FT)	AP			
5-3 (EXT.;38-40 FT)	AP			
5-3 (EXT.;40-43 FT)	AP			

PLANT FIVE
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.01	<0.01	<0.01	0.57
5-11	<0.01	0.09	0.02	0.04
BOTTOM ASH POND LIQUORS				
5-11A	0.1			
5-17			0.2	0.22
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.49			
5-1 S4 (20.5-22.5 FT)	0.43			
5-1 U3 (24-26.5 FT)	0.14			
5-2 U1 (6.5-9 FT)	1.83			
5-2 S2 (10.5-12.5 FT)	0.14			
5-3 (20 FT)	0.02			
5-3 S9 (22-24 FT)	0.08			
5-3 U4 (31-32.5 FT)	<0.01			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		1.6		
5-13A (NE CORNER)			0.26	
5-14 (POND OVERFLOW)			0.22	0.24
5-15 (S DIKE)			0.23	
5-16 (E CORNER DIKE)			0.31	
RECYCLE BASIN				
5-18			0.34	0.17
PERIPHERAL WELLS				
5-7	<0.01	<0.01	0.02	0.02
5-8	<0.01	0.09	0.02	0.02
5-10	<0.01	0.04	0.02	0.04
DOWNGRADIENT WELLS				
5-4	<0.01	<0.01	0.02	0.04
5-6	<0.01	<0.01	0.02	0.09
5-9	<0.01	<0.01	<0.01	0.04

PLANT FIVE
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	3			
5-2 (U4;1.7-3.7 IN)	18			
5-3 (19-25 IN)	0.6			
5-3 (28-36 IN)	6.1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	0.824			
5-1 (LIQ;1-2 FT BELOW LINER)	3.32			
5-1 (LIQ;2-4 FT BELOW LINER)	2.67			
5-1 (LIQ;4-5 FT BELOW LINER)	1.26			
5-2 (31 FT WATER)	0.42			
5-3 (LIQ.;36-38 FT)	1.32			
5-3 (LIQ.;38-40 FT)	25.8			
5-3 (LIQ.;40-43 FT)	4.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.08			
5-1 (EXT2;0-1 FT BELOW LINER)	1.13			
5-1 (EXT ;1-2 FT BELOW LINER)	0.2			
5-1 (EXT1;2-4 FT BELOW LINER)	0.11			
5-1 (EXT2;2-4 FT BELOW LINER)	0.17			
5-1 (EXT ;4-5 FT BELOW LINER)	0.12			
5-3 (EXT.;36-38 FT)	0.06			
5-3 (EXT.;38-40 FT)	1.05			
5-3 (EXT.;40-43 FT)	0.3			

PLANT FIVE
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	2	<1	<1	3
5-11	2	<1	<1	<1
BOTTOM ASH POND LIQUORS				
5-11A	23			
5-17			20	15
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	30			
5-1 S4 (20.5-22.5 FT)	22			
5-1 U3 (24-26.5 FT)	23			
5-2 U1 (6.5-9 FT)	50			
5-2 S2 (10.5-12.5 FT)	23			
5-3 (20 FT)	22			
5-3 S9 (22-24 FT)	24			
5-3 U4 (31-32.5 FT)	12.5			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		40		
5-13A (NE CORNER)			7	
5-14 (POND OVERFLOW)			14	14
5-15 (S DIKE)			14	
5-16 (E CORNER DIKE)			15	
RECYCLE BASIN				
5-18			23	17
PERIPHERAL WELLS				
5-7	4	<1	1	3
5-8	3	2	2	3
5-10	<1	<1	<1	<1
DOWNGRADIENT WELLS				
5-4	<1	2	<1	3
5-6	2	<1	1	3
5-9	3	<1	<1	<1

PLANT FIVE
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	20			
5-2 (U4;1.7-3.7 IN)	<50			
5-3 (19-25 IN)	<20			
5-3 (28-36 IN)	30			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<10			
5-1 (LIQ;1-2 FT BELOW LINER)	<33			
5-1 (LIQ;2-4 FT BELOW LINER)	38			
5-1 (LIQ;4-5 FT BELOW LINER)	38			
5-2 (31 FT WATER)	29			
5-3 (LIQ.;36-38 FT)	88			
5-3 (LIQ.;38-40 FT)	123			
5-3 (LIQ.;40-43 FT)	<150			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<1			
5-1 (EXT2;0-1 FT BELOW LINER)	1			
5-1 (EXT ;1-2 FT BELOW LINER)	<2			
5-1 (EXT1;2-4 FT BELOW LINER)	2			
5-1 (EXT2;2-4 FT BELOW LINER)	2			
5-1 (EXT ;4-5 FT BELOW LINER)	3			
5-3 (EXT.;36-38 FT)	4			
5-3 (EXT.;38-40 FT)	5			
5-3 (EXT.;40-43 FT)	<10			

PLANT FIVE
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	17.6	19.2	18.6	19.5
5-11	28.8	22.2	18.6	21.9
BOTTOM ASH POND LIQUORS				
5-11A	344			
5-17			201	185
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	1530			
5-1 S4 (20.5-22.5 FT)	436			
5-1 U3 (24-26.5 FT)	165			
5-2 U1 (6.5-9 FT)	206			
5-2 S2 (10.5-12.5 FT)	302			
5-3 (20 FT)	2.97			
5-3 S9 (22-24 FT)	2.61			
5-3 U4 (31-32.5 FT)	4.44			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		3540		
5-13A (NE CORNER)			2020	
5-14 (POND OVERFLOW)			2050	2150
5-15 (S DIKE)			2010	
5-16 (E CORNER DIKE)			2170	
RECYCLE BASIN				
5-18			297	207
PERIPHERAL WELLS				
5-7	33.2	23.7	21.6	22.5
5-8	17.2	16.9	17.5	18.2
5-10	22.9	23.8	21.6	22.1
DOWNGRADIENT WELLS				
5-4	19.2	18.7	21.3	20.1
5-6	24.2	22.7	20.6	21.1
5-9	14.7	14.9	14.1	15.2

PLANT FIVE
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	190			
5-2 (U4;1.7-3.7 IN)	188			
5-3 (19-25 IN)	232			
5-3 (28-36 IN)	186			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	262			
5-1 (LIQ;1-2 FT BELOW LINER)	276			
5-1 (LIQ;2-4 FT BELOW LINER)	142			
5-1 (LIQ;4-5 FT BELOW LINER)	112			
5-2 (31 FT WATER)	8050			
5-3 (LIQ.;36-38 FT)	238			
5-3 (LIQ.;38-40 FT)	137			
5-3 (LIQ.;40-43 FT)	116			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	25.4			
5-1 (EXT2;0-1 FT BELOW LINER)	3.45			
5-1 (EXT ;1-2 FT BELOW LINER)	16.6			
5-1 (EXT1;2-4 FT BELOW LINER)	7.44			
5-1 (EXT2;2-4 FT BELOW LINER)	3.62			
5-1 (EXT ;4-5 FT BELOW LINER)	8.9			
5-3 (EXT.;36-38 FT)	10.8			
5-3 (EXT.;38-40 FT)	5.55			
5-3 (EXT.;40-43 FT)	7.7			

PLANT FIVE
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.02	<0.01	<0.01	<0.01
5-11	0.07	0.03	<0.01	<0.01
BOTTOM ASH POND LIQUORS				
5-11A	<0.01			
5-17			0.45	0.14
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	1.02			
5-1 S4 (20.5-22.5 FT)	0.52			
5-1 U3 (24-26.5 FT)	0.51			
5-2 U1 (6.5-9 FT)	0.49			
5-2 S2 (10.5-12.5 FT)	0.19			
5-3 (20 FT)	<0.01			
5-3 S9 (22-24 FT)	<0.01			
5-3 U4 (31-32.5 FT)	<0.01			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.8		
5-13A (NE CORNER)			1.03	
5-14 (POND OVERFLOW)			14.3	15.8
5-15 (S DIKE)			13.7	
5-16 (E CORNER DIKE)			15	
RECYCLE BASIN				
5-18			1.3	0.35
PERIPHERAL WELLS				
5-7	0.22	<0.01	<0.01	<0.01
5-8	<0.01	<0.01	<0.01	<0.01
5-10	0.01	<0.01	<0.01	<0.01
DOWNGRADIENT WELLS				
5-4	<0.01	<0.01	<0.01	<0.01
5-6	1.09	0.06	<0.01	<0.01
5-9	0.02	0.03	<0.01	<0.01

PLANT FIVE
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	22			
5-2 (U4;1.7-3.7 IN)	7			
5-3 (19-25 IN)	0.5			
5-3 (28-36 IN)	0.3			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<0.103			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.332			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.191			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.126			
5-2 (31 FT WATER)	39.4			
5-3 (LIQ.;36-38 FT)	<0.44			
5-3 (LIQ.;38-40 FT)	<1.23			
5-3 (LIQ.;40-43 FT)	<1.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.01			
5-1 (EXT2;0-1 FT BELOW LINER)	0.04			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.02			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.01			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.01			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.01			
5-3 (EXT.;36-38 FT)	<0.02			
5-3 (EXT.;38-40 FT)	<0.05			
5-3 (EXT.;40-43 FT)	<0.1			

PLANT FIVE
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.3	<0.3	<0.3	<0.3
5-11	<0.3	<0.3	<0.3	<0.3
BOTTOM ASH POND LIQUORS				
5-11A	0.6			
5-17			<0.3	0.4
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	11			
5-1 S4 (20.5-22.5 FT)	6.4			
5-1 U3 (24-26.5 FT)	7.1			
5-2 U1 (6.5-9 FT)	4.7			
5-2 S2 (10.5-12.5 FT)	5.4			
5-3 (20 FT)	2.1			
5-3 S9 (22-24 FT)	3.7			
5-3 U4 (31-32.5 FT)	1.88			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<2		
5-13A (NE CORNER)			4.2	
5-14 (POND OVERFLOW)			1.6	1.7
5-15 (S DIKE)			1.6	
5-16 (E CORNER DIKE)			1.7	
RECYCLE BASIN				
5-18			0.4	0.4
PERIPHERAL WELLS				
5-7	<0.3	<0.3	<0.3	<0.3
5-8	<0.3	<0.3	<0.3	<0.3
5-10	<0.3	<0.3	<0.3	<0.3
DOWNGRADIENT WELLS				
5-4	<0.3	<0.3	<0.3	<0.3
5-6	<0.3	<0.3	<0.3	<0.3
5-9	<0.3	<0.3	<0.3	<0.3

PLANT FIVE
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<2			
5-2 (U4;1.7-3.7 IN)	<10			
5-3 (19-25 IN)	<4			
5-3 (28-36 IN)	<4			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<3.09			
5-1 (LIQ;1-2 FT BELOW LINER)	<8.3			
5-1 (LIQ;2-4 FT BELOW LINER)	<5.73			
5-1 (LIQ;4-5 FT BELOW LINER)	<3.78			
5-2 (31 FT WATER)	2.3			
5-3 (LIQ.;36-38 FT)	<8.8			
5-3 (LIQ.;38-40 FT)	<24.6			
5-3 (LIQ.;40-43 FT)	<30			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.3			
5-1 (EXT2;0-1 FT BELOW LINER)	<0.3			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.5			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.3			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.3			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.3			
5-3 (EXT.;36-38 FT)	<0.4			
5-3 (EXT.;38-40 FT)	<1			
5-3 (EXT.;40-43 FT)	<2			

PLANT FIVE
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	5	4	4	5
5-11	6	2	2	3
BOTTOM ASH POND LIQUORS				
5-11A	234			
5-17			113	106
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	857			
5-1 S4 (20.5-22.5 FT)	468			
5-1 U3 (24-26.5 FT)	330			
5-2 U1 (6.5-9 FT)	1210			
5-2 S2 (10.5-12.5 FT)	872			
5-3 (20 FT)	257			
5-3 S9 (22-24 FT)	144			
5-3 U4 (31-32.5 FT)	200			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		760		
5-13A (NE CORNER)			379	
5-14 (POND OVERFLOW)			262	284
5-15 (S DIKE)			252	
5-16 (E CORNER DIKE)			268	
RECYCLE BASIN				
5-18			102	98
PERIPHERAL WELLS				
5-7	6	4	3	4
5-8	4	3	4	4
5-10	3	3	4	4
DOWNGRADIENT WELLS				
5-4	3	3	2	3
5-6	6	3	3	4
5-9	4	<1	2	3

PLANT FIVE
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	100			
5-2 (U4;1.7-3.7 IN)	200			
5-3 (19-25 IN)	80			
5-3 (28-36 IN)	70			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	165			
5-1 (LIQ;1-2 FT BELOW LINER)	99.6			
5-1 (LIQ;2-4 FT BELOW LINER)	115			
5-1 (LIQ;4-5 FT BELOW LINER)	75.6			
5-2 (31 FT WATER)	884			
5-3 (LIQ.;36-38 FT)	132			
5-3 (LIQ.;38-40 FT)	<246			
5-3 (LIQ.;40-43 FT)	<300			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	16			
5-1 (EXT2;0-1 FT BELOW LINER)	6			
5-1 (EXT ;1-2 FT BELOW LINER)	6			
5-1 (EXT1;2-4 FT BELOW LINER)	6			
5-1 (EXT2;2-4 FT BELOW LINER)	4			
5-1 (EXT ;4-5 FT BELOW LINER)	6			
5-3 (EXT.;36-38 FT)	6			
5-3 (EXT.;38-40 FT)	<10			
5-3 (EXT.;40-43 FT)	<20			

PLANT FIVE
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.06	<0.05	<0.05	<0.05
5-11	0.06	<0.05	<0.05	<0.05
BOTTOM ASH POND LIQUORS				
5-11A	0.26			
5-17			0.14	0.11
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.42			
5-1 S4 (20.5-22.5 FT)	0.22			
5-1 U3 (24-26.5 FT)	0.17			
5-2 U1 (6.5-9 FT)	0.72			
5-2 S2 (10.5-12.5 FT)	0.41			
5-3 (20 FT)	0.09			
5-3 S9 (22-24 FT)	0.16			
5-3 U4 (31-32.5 FT)	<0.05			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.6		
5-13A (NE CORNER)			0.18	
5-14 (POND OVERFLOW)			0.28	0.32
5-15 (S DIKE)			0.27	
5-16 (E CORNER DIKE)			0.33	
RECYCLE BASIN				
5-18			0.13	0.13
PERIPHERAL WELLS				
5-7	0.07	<0.05	<0.05	<0.05
5-8	0.06	<0.05	<0.05	<0.05
5-10	0.05	<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
5-4	0.06	<0.05	<0.05	<0.05
5-6	0.09	<0.05	<0.05	<0.05
5-9	0.06	<0.05	<0.05	<0.05

PLANT FIVE
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	0.8			
5-2 (U4;1.7-3.7 IN)	<2.5			
5-3 (19-25 IN)	<1			
5-3 (28-36 IN)	<1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	5.97			
5-1 (LIQ;1-2 FT BELOW LINER)	3.32			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.955			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.63			
5-2 (31 FT WATER)	0.93			
5-3 (LIQ.;36-38 FT)	<2.2			
5-3 (LIQ.;38-40 FT)	<6.15			
5-3 (LIQ.;40-43 FT)	<7.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.58			
5-1 (EXT2;0-1 FT BELOW LINER)	0.36			
5-1 (EXT ;1-2 FT BELOW LINER)	0.2			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT2;2-4 FT BELOW LINER)	0.08			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.05			
5-3 (EXT.;36-38 FT)	<0.1			
5-3 (EXT.;38-40 FT)	<0.25			
5-3 (EXT.;40-43 FT)	<0.5			

PLANT FIVE
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.6	<0.6	<0.6	<0.6
5-11	<0.6	<0.6	<0.6	<0.6
BOTTOM ASH POND LIQUORS				
5-11A	0.8			
5-17			1.3	1.2
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	2.4			
5-1 S4 (20.5-22.5 FT)	1.3			
5-1 U3 (24-26.5 FT)	1.4			
5-2 U1 (6.5-9 FT)	1.7			
5-2 S2 (10.5-12.5 FT)	1.3			
5-3 (20 FT)	1			
5-3 S9 (22-24 FT)	0.9			
5-3 U4 (31-32.5 FT)	<0.6			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		9		
5-13A (NE CORNER)			2.4	
5-14 (POND OVERFLOW)			1.7	1.9
5-15 (S DIKE)			1.7	
5-16 (E CORNER DIKE)			1.9	
RECYCLE BASIN				
5-18			1.6	1.2
PERIPHERAL WELLS				
5-7	<0.6	<0.6	<0.6	<0.6
5-8	<0.6	<0.6	<0.6	<0.6
5-10	<0.6	<0.6	<0.6	<0.6
DOWNGRADIENT WELLS				
5-4	<0.6	<0.6	<0.6	<0.6
5-6	<0.6	<0.6	<0.6	<0.6
5-9	<0.6	<0.6	<0.6	<0.6

PLANT FIVE
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<5			
5-2 (U4;1.7-3.7 IN)	<25			
5-3 (19-25 IN)	<10			
5-3 (28-36 IN)	<10			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<6.18			
5-1 (LIQ;1-2 FT BELOW LINER)	<16.6			
5-1 (LIQ;2-4 FT BELOW LINER)	<11.5			
5-1 (LIQ;4-5 FT BELOW LINER)	<7.56			
5-2 (31 FT WATER)	2.9			
5-3 (LIQ.;36-38 FT)	<22			
5-3 (LIQ.;38-40 FT)	<61.5			
5-3 (LIQ.;40-43 FT)	<75			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.6			
5-1 (EXT2;0-1 FT BELOW LINER)	<0.6			
5-1 (EXT ;1-2 FT BELOW LINER)	<1			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.6			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.6			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.6			
5-3 (EXT.;36-38 FT)	<1			
5-3 (EXT.;38-40 FT)	<2.5			
5-3 (EXT.;40-43 FT)	<5			

PLANT FIVE
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.05	<0.05	<0.05	<0.05
5-11	<0.05	<0.05	<0.05	<0.05
BOTTOM ASH POND LIQUORS				
5-11A	<0.05			
5-17			<0.05	<0.05
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.05			
5-1 S4 (20.5-22.5 FT)	<0.05			
5-1 U3 (24-26.5 FT)	<0.05			
5-2 U1 (6.5-9 FT)	<0.05			
5-2 S2 (10.5-12.5 FT)	<0.05			
5-3 (20 FT)	<0.05			
5-3 S9 (22-24 FT)	<0.05			
5-3 U4 (31-32.5 FT)	<0.05			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		1.4		
5-13A (NE CORNER)			<0.05	
5-14 (POND OVERFLOW)			<0.05	<0.05
5-15 (S DIKE)			<0.05	
5-16 (E CORNER DIKE)			<0.05	
RECYCLE BASIN				
5-18			<0.05	<0.05
PERIPHERAL WELLS				
5-7	<0.05	<0.05	<0.05	<0.05
5-8	<0.05	<0.05	<0.05	<0.05
5-10	<0.05	<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
5-4	<0.05	<0.05	<0.05	<0.05
5-6	<0.05	<0.05	<0.05	<0.05
5-9	<0.05	<0.05	<0.05	<0.05

PLANT FIVE
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<0.5			
5-2 (U4;1.7-3.7 IN)	<2.5			
5-3 (19-25 IN)	<1			
5-3 (28-36 IN)	<1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	5.15			
5-1 (LIQ;1-2 FT BELOW LINER)	2.49			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.955			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.63			
5-2 (31 FT WATER)	<0.05			
5-3 (LIQ.;36-38 FT)	<2.2			
5-3 (LIQ.;38-40 FT)	<6.15			
5-3 (LIQ.;40-43 FT)	<7.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.5			
5-1 (EXT2;0-1 FT BELOW LINER)	0.4			
5-1 (EXT ;1-2 FT BELOW LINER)	0.15			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.05			
5-3 (EXT.;36-38 FT)	<0.1			
5-3 (EXT.;38-40 FT)	<0.25			
5-3 (EXT.;40-43 FT)	<0.5			

PLANT FIVE
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	6.62	7.02	5.42	5.69
5-11	7.72	7.62	6.19	6.9
BOTTOM ASH POND LIQUORS				
5-11A	1.51			
5-17			5.15	5.46
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.18			
5-1 S4 (20.5-22.5 FT)	2.19			
5-1 U3 (24-26.5 FT)	1.68			
5-2 U1 (6.5-9 FT)	15.4			
5-2 S2 (10.5-12.5 FT)	1.52			
5-3 (20 FT)	2.06			
5-3 S9 (22-24 FT)	1.21			
5-3 U4 (31-32.5 FT)	0.375			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.5		
5-13A (NE CORNER)			<0.05	
5-14 (POND OVERFLOW)			3.65	<0.05
5-15 (S DIKE)			3.81	
5-16 (E CORNER DIKE)			6.33	
RECYCLE BASIN				
5-18			8.04	5.88
PERIPHERAL WELLS				
5-7	8.36	7.61	6.27	6.36
5-8	7.19	7.13	5.32	6
5-10	6.98	7.31	5.79	6.49
DOWNGRADIENT WELLS				
5-4	7.46	8.14	5.89	6.21
5-6	5.02	7.52	5.99	6.14
5-9	7.01	7.64	5.91	6.91

PLANT FIVE
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	11.3			
5-2 (U4;1.7-3.7 IN)	12			
5-3 (19-25 IN)	5			
5-3 (28-36 IN)	5			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<0.515			
5-1 (LIQ;1-2 FT BELOW LINER)	48.1			
5-1 (LIQ;2-4 FT BELOW LINER)	78.5			
5-1 (LIQ;4-5 FT BELOW LINER)	39.3			
5-2 (31 FT WATER)	<0.05			
5-3 (LIQ.;36-38 FT)	121			
5-3 (LIQ.;38-40 FT)	140			
5-3 (LIQ.;40-43 FT)	117			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.05			
5-1 (EXT2;0-1 FT BELOW LINER)	2.14			
5-1 (EXT ;1-2 FT BELOW LINER)	2.9			
5-1 (EXT1;2-4 FT BELOW LINER)	4.11			
5-1 (EXT2;2-4 FT BELOW LINER)	3.46			
5-1 (EXT ;4-5 FT BELOW LINER)	3.12			
5-3 (EXT.;36-38 FT)	5.52			
5-3 (EXT.;38-40 FT)	5.7			
5-3 (EXT.;40-43 FT)	7.8			

PLANT FIVE
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.036	0.042	0.038	0.04
5-11	0.064	0.043	0.041	0.049
BOTTOM ASH POND LIQUORS				
5-11A	10.1			
5-17			9.41	7.21
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	28.2			
5-1 S4 (20.5-22.5 FT)	16.1			
5-1 U3 (24-26.5 FT)	14.3			
5-2 U1 (6.5-9 FT)	39.8			
5-2 S2 (10.5-12.5 FT)	33.9			
5-3 (20 FT)	22.7			
5-3 S9 (22-24 FT)	16.8			
5-3 U4 (31-32.5 FT)	16.9			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		33.5		
5-13A (NE CORNER)			13.6	
5-14 (POND OVERFLOW)			10.2	10.4
5-15 (S DIKE)			9.79	
5-16 (E CORNER DIKE)			10.5	
RECYCLE BASIN				
5-18			7.34	6.24
PERIPHERAL WELLS				
5-7	0.056	0.04	0.041	0.043
5-8	0.041	0.028	0.042	0.042
5-10	0.044	0.052	0.05	0.052
DOWNGRADIENT WELLS				
5-4	0.038	0.041	0.043	0.041
5-6	0.043	0.042	0.043	0.039
5-9	0.043	0.019	0.034	0.034

PLANT FIVE
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	1.67			
5-2 (U4;1.7-3.7 IN)	5.9			
5-3 (19-25 IN)	2.64			
5-3 (28-36 IN)	1.74			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	2.54			
5-1 (LIQ;1-2 FT BELOW LINER)	2.22			
5-1 (LIQ;2-4 FT BELOW LINER)	0.554			
5-1 (LIQ;4-5 FT BELOW LINER)	0.441			
5-2 (31 FT WATER)	13.1			
5-3 (LIQ.;36-38 FT)	2.29			
5-3 (LIQ.;38-40 FT)	<0.123			
5-3 (LIQ.;40-43 FT)	2.1			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.247			
5-1 (EXT2;0-1 FT BELOW LINER)	0.042			
5-1 (EXT ;1-2 FT BELOW LINER)	0.134			
5-1 (EXT1;2-4 FT BELOW LINER)	0.029			
5-1 (EXT2;2-4 FT BELOW LINER)	0.01			
5-1 (EXT ;4-5 FT BELOW LINER)	0.035			
5-3 (EXT.;36-38 FT)	0.104			
5-3 (EXT.;38-40 FT)	<0.005			
5-3 (EXT.;40-43 FT)	0.14			

PLANT FIVE
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.04	<0.01	0.02	0.04
5-11	0.01	<0.01	<0.01	0.03
BOTTOM ASH POND LIQUORS				
5-11A	<0.01			
5-17			<0.01	<0.01
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.01			
5-1 S4 (20.5-22.5 FT)	<0.01			
5-1 U3 (24-26.5 FT)	<0.01			
5-2 U1 (6.5-9 FT)	<0.01			
5-2 S2 (10.5-12.5 FT)	<0.01			
5-3 (20 FT)	<0.01			
5-3 S9 (22-24 FT)	<0.01			
5-3 U4 (31-32.5 FT)	<0.01			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.5		
5-13A (NE CORNER)			<0.01	
5-14 (POND OVERFLOW)			<0.01	<0.01
5-15 (S DIKE)			<0.01	
5-16 (E CORNER DIKE)			<0.01	
RECYCLE BASIN				
5-18			<0.01	<0.01
PERIPHERAL WELLS				
5-7	0.05	<0.01	0.04	0.04
5-8	0.04	<0.01	0.02	0.05
5-10	<0.01	<0.01	<0.01	0.02
DOWNGRADIENT WELLS				
5-4	0.01	<0.01	0.03	0.04
5-6	0.02	<0.01	0.02	0.05
5-9	0.04	<0.01	<0.01	0.02

Note: Values greater than detection limit in this site report are not likely to be real since blanks ranged from <0.01 to 0.05 ppm.

PLANT FIVE
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<0.5			
5-2 (U4;1.7-3.7 IN)	<2.5			
5-3 (19-25 IN)	1			
5-3 (28-36 IN)	<1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	0.927			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.332			
5-1 (LIQ;2-4 FT BELOW LINER)	2.67			
5-1 (LIQ;4-5 FT BELOW LINER)	1.76			
5-2 (31 FT WATER)	<0.01			
5-3 (LIQ.;36-38 FT)	<2.2			
5-3 (LIQ.;38-40 FT)	<6.15			
5-3 (LIQ.;40-43 FT)	<7.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.09			
5-1 (EXT2;0-1 FT BELOW LINER)	0.13			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.02			
5-1 (EXT1;2-4 FT BELOW LINER)	0.14			
5-1 (EXT2;2-4 FT BELOW LINER)	0.16			
5-1 (EXT ;4-5 FT BELOW LINER)	0.14			
5-3 (EXT.;36-38 FT)	<0.1			
5-3 (EXT.;38-40 FT)	<0.25			
5-3 (EXT.;40-43 FT)	<0.5			

PLANT FIVE
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.005	<0.005	<0.005	<0.005
5-11	<0.005	<0.005	<0.005	0.005
BOTTOM ASH POND LIQUORS				
5-11A	<0.005			
5-17			0.006	<0.005
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.009			
5-1 S4 (20.5-22.5 FT)	0.039			
5-1 U3 (24-26.5 FT)	0.014			
5-2 U1 (6.5-9 FT)	0.635			
5-2 S2 (10.5-12.5 FT)	<0.005			
5-3 (20 FT)	<0.005			
5-3 S9 (22-24 FT)	0.011			
5-3 U4 (31-32.5 FT)	<0.005			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.05		
5-13A (NE CORNER)			<0.005	
5-14 (POND OVERFLOW)			<0.005	<0.005
5-15 (S DIKE)			<0.005	
5-16 (E CORNER DIKE)			<0.005	
RECYCLE BASIN				
5-18			<0.005	<0.005
PERIPHERAL WELLS				
5-7	<0.005	<0.005	<0.005	<0.005
5-8	<0.005	<0.005	<0.005	<0.005
5-10	<0.005	<0.005	<0.005	<0.005
DOWNGRADIENT WELLS				
5-4	<0.005	<0.005	<0.005	<0.005
5-6	<0.005	<0.005	<0.005	<0.005
5-9	<0.005	<0.005	<0.005	0.006

PLANT FIVE
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<0.05			
5-2 (U4;1.7-3.7 IN)	<0.25			
5-3 (19-25 IN)	<0.1			
5-3 (28-36 IN)	<0.1			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<0.0515			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.166			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.0955			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.063			
5-2 (31 FT WATER)	<0.005			
5-3 (LIQ.;36-38 FT)	<0.22			
5-3 (LIQ.;38-40 FT)	<0.615			
5-3 (LIQ.;40-43 FT)	<0.75			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.005			
5-1 (EXT2;0-1 FT BELOW LINER)	0.026			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.01			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.005			
5-1 (EXT2;2-4 FT BELOW LINER)	0.005			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.005			
5-3 (EXT.;36-38 FT)	<0.01			
5-3 (EXT.;38-40 FT)	<0.025			
5-3 (EXT.;40-43 FT)	<0.05			

PLANT FIVE
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.005	<0.005	0.006	0.009
5-11	<0.005	<0.005	<0.005	<0.005
BOTTOM ASH POND LIQUORS				
5-11A	<0.005			
5-17			0.044	0.02
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.005			
5-1 S4 (20.5-22.5 FT)	<0.005			
5-1 U3 (24-26.5 FT)	<0.005			
5-2 U1 (6.5-9 FT)	<0.005			
5-2 S2 (10.5-12.5 FT)	<0.005			
5-3 (20 FT)	<0.005			
5-3 S9 (22-24 FT)	0.019			
5-3 U4 (31-32.5 FT)	<0.005			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.14		
5-13A (NE CORNER)			0.132	
5-14 (POND OVERFLOW)			0.093	0.11
5-15 (S DIKE)			0.094	
5-16 (E CORNER DIKE)			0.1	
RECYCLE BASIN				
5-18			0.1	0.036
PERIPHERAL WELLS				
5-7	<0.005	<0.005	0.006	0.007
5-8	<0.005	<0.005	<0.005	0.009
5-10	<0.005	<0.005	<0.005	<0.005
DOWNGRADIENT WELLS				
5-4	<0.005	<0.005	0.006	0.007
5-6	<0.005	<0.005	0.008	0.011
5-9	<0.005	<0.005	0.005	<0.005

PLANT FIVE
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	0.09			
5-2 (U4;1.7-3.7 IN)	0.5			
5-3 (19-25 IN)	0.2			
5-3 (28-36 IN)	0.2			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	0.165			
5-1 (LIQ;1-2 FT BELOW LINER)	<0.166			
5-1 (LIQ;2-4 FT BELOW LINER)	0.458			
5-1 (LIQ;4-5 FT BELOW LINER)	0.151			
5-2 (31 FT WATER)	<0.005			
5-3 (LIQ.;36-38 FT)	0.528			
5-3 (LIQ.;38-40 FT)	<0.615			
5-3 (LIQ.;40-43 FT)	1.5			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	0.016			
5-1 (EXT2;0-1 FT BELOW LINER)	0.016			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.01			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.005			
5-1 (EXT2;2-4 FT BELOW LINER)	0.031			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.005			
5-3 (EXT.;36-38 FT)	0.024			
5-3 (EXT.;38-40 FT)	<0.025			
5-3 (EXT.;40-43 FT)	0.1			

PLANT FIVE
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.07	<0.05	<0.05	<0.05
5-11	<0.05	<0.05	<0.05	<0.05
BOTTOM ASH POND LIQUORS				
5-11A	0.19			
5-17			<0.05	0.11
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	0.36			
5-1 S4 (20.5-22.5 FT)	0.21			
5-1 U3 (24-26.5 FT)	<0.05			
5-2 U1 (6.5-9 FT)	0.18			
5-2 S2 (10.5-12.5 FT)	0.14			
5-3 (20 FT)	0.07			
5-3 S9 (22-24 FT)	<0.05			
5-3 U4 (31-32.5 FT)	<0.05			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		0.6		
5-13A (NE CORNER)			<0.05	
5-14 (POND OVERFLOW)			<0.05	0.61
5-15 (S DIKE)			<0.05	
5-16 (E CORNER DIKE)			<0.05	
RECYCLE BASIN				
5-18			<0.05	0.13
PERIPHERAL WELLS				
5-7	0.07	<0.05	<0.05	<0.05
5-8	<0.05	<0.05	<0.05	<0.05
5-10	<0.05	<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
5-4	0.07	<0.05	<0.05	<0.05
5-6	0.08	<0.05	<0.05	<0.05
5-9	<0.05	<0.05	<0.05	<0.05

PLANT FIVE
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	0.7			
5-2 (U4;1.7-3.7 IN)	1.5			
5-3 (19-25 IN)	1.2			
5-3 (28-36 IN)	0.5			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	86.8			
5-1 (LIQ;1-2 FT BELOW LINER)	33.2			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.955			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.63			
5-2 (31 FT WATER)	7.78			
5-3 (LIQ.;36-38 FT)	1.32			
5-3 (LIQ.;38-40 FT)	4.92			
5-3 (LIQ.;40-43 FT)	3			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	8.43			
5-1 (EXT2;0-1 FT BELOW LINER)	3.76			
5-1 (EXT ;1-2 FT BELOW LINER)	2			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.05			
5-3 (EXT.;36-38 FT)	0.06			
5-3 (EXT.;38-40 FT)	0.2			
5-3 (EXT.;40-43 FT)	0.2			

PLANT FIVE
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.05	<0.05	<0.05	<0.05
5-11	<0.05	<0.05	<0.05	<0.05
BOTTOM ASH POND LIQUORS				
5-11A	<0.05			
5-17			<0.05	<0.05
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	<0.05			
5-1 S4 (20.5-22.5 FT)	<0.05			
5-1 U3 (24-26.5 FT)	<0.05			
5-2 U1 (6.5-9 FT)	0.06			
5-2 S2 (10.5-12.5 FT)	<0.05			
5-3 (20 FT)	<0.05			
5-3 S9 (22-24 FT)	<0.05			
5-3 U4 (31-32.5 FT)	<0.05			
POND SURFACE LIQUORS				
5-12 (SE CORNER)		<0.2		
5-13A (NE CORNER)			<0.05	
5-14 (POND OVERFLOW)			<0.05	<0.05
5-15 (S DIKE)			<0.05	
5-16 (E CORNER DIKE)			<0.05	
RECYCLE BASIN				
5-18			0.08	<0.05
PERIPHERAL WELLS				
5-7	<0.05	<0.05	<0.05	<0.05
5-8	<0.05	<0.05	<0.05	<0.05
5-10	<0.05	<0.05	<0.05	<0.05
DOWNGRADIENT WELLS				
5-4	<0.05	<0.05	<0.05	<0.05
5-6	<0.05	<0.05	<0.05	<0.05
5-9	<0.05	<0.05	<0.05	<0.05

PLANT FIVE
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)	<0.2			
5-2 (U4;1.7-3.7 IN)	<1			
5-3 (19-25 IN)	<0.4			
5-3 (28-36 IN)	<0.4			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	<0.515			
5-1 (LIQ;1-2 FT BELOW LINER)	<1.66			
5-1 (LIQ;2-4 FT BELOW LINER)	<0.955			
5-1 (LIQ;4-5 FT BELOW LINER)	<0.63			
5-2 (31 FT WATER)	<0.05			
5-3 (LIQ.;36-38 FT)	<0.88			
5-3 (LIQ.;38-40 FT)	<2.46			
5-3 (LIQ.;40-43 FT)	<3			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	<0.05			
5-1 (EXT2;0-1 FT BELOW LINER)	<0.05			
5-1 (EXT ;1-2 FT BELOW LINER)	<0.1			
5-1 (EXT1;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT2;2-4 FT BELOW LINER)	<0.05			
5-1 (EXT ;4-5 FT BELOW LINER)	<0.05			
5-3 (EXT.;36-38 FT)	<0.04			
5-3 (EXT.;38-40 FT)	<0.1			
5-3 (EXT.;40-43 FT)	<0.2			

PLANT FIVE
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	0.54	<0.15		
5-11		0.69		
BOTTOM ASH POND LIQUORS				
5-11A				
5-17				
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	2.9			
5-1 S4 (20.5-22.5 FT)				
5-1 U3 (24-26.5 FT)	2.7			
5-2 U1 (6.5-9 FT)	4.3			
5-2 S2 (10.5-12.5 FT)	1			
5-3 (20 FT)				
5-3 S9 (22-24 FT)	1			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)		4.7		
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)				
5-15 (S DIKE)				
5-16 (E CORNER DIKE)				
RECYCLE BASIN				
5-18				
PERIPHERAL WELLS				
5-7		0.34		
5-8				
5-10		0.23		
DOWNGRADIENT WELLS				
5-4		0.28		
5-6		0.72		
5-9	0.44			

PLANT FIVE
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)	<3			
5-3 (28-36 IN)	6.8			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)				
5-1 (LIQ;1-2 FT BELOW LINER)				
5-1 (LIQ;2-4 FT BELOW LINER)				
5-1 (LIQ;4-5 FT BELOW LINER)				
5-2 (31 FT WATER)	2.2			
5-3 (LIQ.;36-38 FT)	88			
5-3 (LIQ.;38-40 FT)	<73.8			
5-3 (LIQ.;40-43 FT)	<45			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)				
5-1 (EXT2;0-1 FT BELOW LINER)				
5-1 (EXT ;1-2 FT BELOW LINER)				
5-1 (EXT1;2-4 FT BELOW LINER)				
5-1 (EXT2;2-4 FT BELOW LINER)				
5-1 (EXT ;4-5 FT BELOW LINER)				
5-3 (EXT.;36-38 FT)	4			
5-3 (EXT.;38-40 FT)	<3			
5-3 (EXT.;40-43 FT)	<3			

Notes:

EXT = water extract.

LIQ = extract concentration x volume of extract ÷ volume of water originally present in the soil.

The extract volume to soil mass ratios were approximately 15 mL H_2O with 20 g of soil for both locations 5-1 and 5-3.

The volume of extract ÷ volume in soil ratios are:

5-1 [10.3, 16.6 19.1, 12.6]
5-3 [22, 24.6, 15]

PLANT FIVE
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5	<0.26	<0.26		
5-11		<0.26		
BOTTOM ASH POND LIQUORS				
5-11A				
5-17				
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)	49			
5-1 S4 (20.5-22.5 FT)	21			
5-1 U3 (24-26.5 FT)	5			
5-2 U1 (6.5-9 FT)	50			
5-2 S2 (10.5-12.5 FT)	25			
5-3 (20 FT)				
5-3 S9 (22-24 FT)	23			
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)		246		
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)				
5-15 (S DIKE)				
5-16 (E CORNER DIKE)				
RECYCLE BASIN				
5-18				
PERIPHERAL WELLS				
5-7		<0.26		
5-8				
5-10		<0.26		
DOWNGRADIENT WELLS				
5-4		<0.26		
5-6		<0.26		
5-9	<0.26			

PLANT FIVE
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)	<5			
5-3 (28-36 IN)	<5			
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)				
5-1 (LIQ;1-2 FT BELOW LINER)				
5-1 (LIQ;2-4 FT BELOW LINER)				
5-1 (LIQ;4-5 FT BELOW LINER)				
5-2 (31 FT WATER)	7.7			
5-3 (LIQ.;36-38 FT)	<110			
5-3 (LIQ.;38-40 FT)	<123			
5-3 (LIQ.;40-43 FT)	<75			
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)				
5-1 (EXT2;0-1 FT BELOW LINER)				
5-1 (EXT ;1-2 FT BELOW LINER)				
5-1 (EXT1;2-4 FT BELOW LINER)				
5-1 (EXT2;2-4 FT BELOW LINER)				
5-1 (EXT ;4-5 FT BELOW LINER)				
5-3 (EXT.;36-38 FT)	<5			
5-3 (EXT.;38-40 FT)	<5			
5-3 (EXT.;40-43 FT)	<5			

PLANT FIVE
CONCENTRATION OF 38 PH FIELD -

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5		7.6	7.7	7.4
5-11		7.5	7.6	7.6
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			8.5	8.7
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)				
5-1 S4 (20.5-22.5 FT)				
5-1 U3 (24-26.5 FT)				
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)				
5-3 (20 FT)				
5-3 S9 (22-24 FT)				
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)			8	8.1
5-15 (S DIKE)			8.2	
5-16 (E CORNER DIKE)			7.8	
RECYCLE BASIN				
5-18			7.5	8.3
PERIPHERAL WELLS				
5-7		7.4	7.5	7.6
5-8		7.5	7.5	7.6
5-10		7.5	7.5	7.6
DOWNGRADIENT WELLS				
5-4		7.4	7.3	7.4
5-6		7.5	7.6	7.4
5-9		7.6	7.6	

PLANT FIVE
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5		535	510	475
5-11		535	480	525
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			3750	3740
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)				
5-1 S4 (20.5-22.5 FT)				
5-1 U3 (24-26.5 FT)				
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)				
5-3 (20 FT)				
5-3 S9 (22-24 FT)				
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)			10750	12000
5-15 (S DIKE)			10250	
5-16 (E CORNER DIKE)			10500	
RECYCLE BASIN				
5-18			3800	3650
PERIPHERAL WELLS				
5-7		555	570	580
5-8		425	470	460
5-10		615	540	535
DOWNGRADIENT WELLS				
5-4		455	525	515
5-6		610	525	545
5-9		335	360	

PLANT FIVE
CONCENTRATION OF 41 GROUNDWATER LEVEL FT (Measured from top of casing)

SAMPLING POINT DESIGNATION	TRIPS 82181	100681	51082	62182
BACKGROUND WELLS				
5-5		37.3	36.5	36.2
5-11		42.1	40.7	40.2
BOTTOM ASH POND LIQUORS				
5-11A				
5-17				
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)				
5-1 S4 (20.5-22.5 FT)				
5-1 U3 (24-26.5 FT)				
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)				
5-3 (20 FT)				
5-3 S9 (22-24 FT)				
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)				
5-15 (S DIKE)				
5-16 (E CORNER DIKE)				
RECYCLE BASIN				
5-18				
PERIPHERAL WELLS				
5-7		40.7	38	38.7
5-8		39.4	37.4	37.5
5-10		40.3	38.5	38.4
DOWNGRADIENT WELLS				
5-4		42.5	39.2	40.6
5-6		39.4	36.3	37.4
5-9		36.5	33.5	

PLANT FIVE
CONCENTRATION OF 42 DISSOLVED OXYGEN PPM

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
BACKGROUND WELLS				
5-5		8.4	7.4	8.9
5-11		6.5-7.8	6.5	7.5
BOTTOM ASH POND LIQUORS				
5-11A				
5-17			6.5	6.6
FGD POND LIQUORS				
5-1 S3 (12.5-14.5 FT)				
5-1 S4 (20.5-22.5 FT)				
5-1 U3 (24-26.5 FT)				
5-2 U1 (6.5-9 FT)				
5-2 S2 (10.5-12.5 FT)				
5-3 (20 FT)				
5-3 S9 (22-24 FT)				
5-3 U4 (31-32.5 FT)				
POND SURFACE LIQUORS				
5-12 (SE CORNER)				
5-13A (NE CORNER)				
5-14 (POND OVERFLOW)			9	6.8
5-15 (S DIKE)			4	
5-16 (E CORNER DIKE)			5.3	
RECYCLE BASIN				
5-18			6.4	5.2
PERIPHERAL WELLS				
5-7		7.3	7	6.4
5-8		8.3	6.3	8.8
5-10		7.9	7.5	7.3
DOWNGRADIENT WELLS				
5-4		6.9	3.6	6.9
5-6		7.2	2.8	5
5-9		6.4-8.0	4.8	

PLANT FIVE
CONCENTRATION OF 60 LEAD-GRAPHITE FURNACE PPB

SAMPLING POINT DESIGNATION	TRIPS			
	82181	100681	51082	62182
LINER PORE WATERS				
5-1 (U4;5.5-8.5 IN)				
5-2 (U4;1.7-3.7 IN)				
5-3 (19-25 IN)				
5-3 (28-36 IN)				
WATERS UNDER LINER				
5-1 (LIQ;0-1 FT BELOW LINER)	6280			
5-1 (LIQ;1-2 FT BELOW LINER)				
5-1 (LIQ;2-4 FT BELOW LINER)	33			
5-1 (LIQ;4-5 FT BELOW LINER)	50			
5-2 (31 FT WATER)				
5-3 (LIQ.;36-38 FT)				
5-3 (LIQ.;38-40 FT)				
5-3 (LIQ.;40-43 FT)				
ORIGINAL EXTRACT CONCENTRATIONS				
5-1 (EXT1;0-1 FT BELOW LINER)	610			
5-1 (EXT2;0-1 FT BELOW LINER)				
5-1 (EXT ;1-2 FT BELOW LINER)				
5-1 (EXT1;2-4 FT BELOW LINER)	2			
5-1 (EXT2;2-4 FT BELOW LINER)	4			
5-1 (EXT ;4-5 FT BELOW LINER)	4			
5-3 (EXT.;36-38 FT)				
5-3 (EXT.;38-40 FT)				
5-3 (EXT.;40-43 FT)				

SUMMARY OF GROUNDWATER DEPTHS - SHERCO
(in Feet From TOC)

ADL Wells	Measurement Taken 10/5/81-10/6/81	Measurement Taken 5/10/82-5/11/82	Measurement Taken 6/21/82-6/22/82
5-4	42.5 (914.2)*	39.2 (917.5)	40.6 (916.1)
5-5	37.3 (927.4)	36.5 (928.2)	36.2 (928.5)
5-6	39.4 (919.4)	36.3 (922.5)	37.4 (921.4)
5-7	40.7 (922.4)	38.0 (925.1)	38.7 (924.5)
5-8	39.4 (924.2)	37.4 (926.2)	37.5 (926.1)
5-9	36.5 (920.9)	33.5 (923.9)	35.2 (922.2)
5-10	40.3 (923.7)	38.5 (925.5)	38.4 (925.6)
5-11	42.1 (925.3)	40.7 (926.7)	40.2 (927.2)
NSPL Wells			
P1a	78.0 (925.0)	76.3 (926.7)	76.3 (926.7)
P2a			
P2b			
P3a	35.5 (956.8)	32.5 (924.3)	33.3 (923.5)
P3b	35.2 (956.6)	32.3 (924.3)	33.0 (923.6)
P4a	35.5 (959.1)	33.3 (925.8)	33.5 (925.6)
P5a	38.3 (960.5)	35.7 (924.8)	36.1 (924.4)
P5b	38.8 (961.0)	36.2 (924.8)	36.6 (924.4)
P6b	39.8 (964.1)	37.6 (926.5)	37.8 (926.3)
P7b	35.5 (956.9)	32.5 (924.4)	33.2 (923.7)
P8	41.4	40.8	40.7
P9	40.8	40.2	40.1
P10	42.7	42.0	41.9
P11	41.2	40.5	40.2
P12	41.6	40.7	40.8
P13	43.9	43.3	42.1
P14	44.1	43.1	42.9
P15	43.7	43.6	43.2
Pond Level	976.8	983.7	983.5
Recycle Channel	-	945.4	945.0

*Numbers in parentheses are groundwater levels corrected to mean sea level.

PLANT FIVE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	9371
5-1 (20.5-22.5 FT)	9372
5-1 (24-26.5 FT)	9431
5-2 (6.5-9 FT)	9433
5-2 (10.5-12.5 FT)	9378
5-3 (22-24 FT)	9385
5-3 (31-32.5 FT)	9436
5-13(SURFACE)	9493
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	9839
5-1 (U4;5.5-8.5 IN INTO LINER)	9847
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	91186
5-1 (S6B;1-2 FT BELOW LINER)	91188
5-1 (S7 ;2-4 FT BELOW LINER)	91191
5-1 (S8 ;4-5 FT BELOW LINER)	91193

PLANT FIVE
SOLID CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	<0.5
5-1 (20.5-22.5 FT)	<0.5
5-1 (24-26.5 FT)	<0.5
5-2 (6.5-9 FT)	<0.5
5-2 (10.5-12.5 FT)	<0.5
5-3 (22-24 FT)	<0.5
5-3 (31-32.5 FT)	<0.5
5-13(SURFACE)	<0.5
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	<0.5
5-1 (U4;5.5-8.5 IN INTO LINER)	<0.5
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	<0.5
5-1 (S6B;1-2 FT BELOW LINER)	<0.5
5-1 (S7 ;2-4 FT BELOW LINER)	<0.5
5-1 (S8 ;4-5 FT BELOW LINER)	<0.5

PLANT FIVE
SOLID CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	105000
5-1 (20.5-22.5 FT)	98500
5-1 (24-26.5 FT)	111000
5-2 (6.5-9 FT)	62200
5-2 (10.5-12.5 FT)	75300
5-3 (22-24 FT)	69300
5-3 (31-32.5 FT)	78600
5-13(SURFACE)	79300
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	52300
5-1 (U4;5.5-8.5 IN INTO LINER)	54800
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	56600
5-1 (S6B;1-2 FT BELOW LINER)	41600
5-1 (S7 ;2-4 FT BELOW LINER)	41100
5-1 (S8 ;4-5 FT BELOW LINER)	41800

PLANT FIVE
SOLID CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	3.27
5-1 (20.5-22.5 FT)	3.21
5-1 (24-26.5 FT)	3.99
5-2 (6.5-9 FT)	1.01
5-2 (10.5-12.5 FT)	2.34
5-3 (22-24 FT)	1.88
5-3 (31-32.5 FT)	2.05
5-13(SURFACE)	2.22
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	1.02
5-1 (U4;5.5-8.5 IN INTO LINER)	1.01
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	1.05
5-1 (S6B;1-2 FT BELOW LINER)	0.58
5-1 (S7 ;2-4 FT BELOW LINER)	0.65
5-1 (S8 ;4-5 FT BELOW LINER)	0.69

PLANT FIVE
SOLID CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	96600
5-1 (20.5-22.5 FT)	83500
5-1 (24-26.5 FT)	95200
5-2 (6.5-9 FT)	146000
5-2 (10.5-12.5 FT)	124000
5-3 (22-24 FT)	134000
5-3 (31-32.5 FT)	119000
5-13(SURFACE)	214000
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	10700
5-1 (U4;5.5-8.5 IN INTO LINER)	14100
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	9320
5-1 (S6B;1-2 FT BELOW LINER)	22200
5-1 (S7 ;2-4 FT BELOW LINER)	18400
5-1 (S8 ;4-5 FT BELOW LINER)	16800

PLANT FIVE
SOLID CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	9.3
5-1 (20.5-22.5 FT)	8.9
5-1 (24-26.5 FT)	11
5-2 (6.5-9 FT)	9.7
5-2 (10.5-12.5 FT)	9.3
5-3 (22-24 FT)	12.4
5-3 (31-32.5 FT)	12.7
5-13(SURFACE)	1.1
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	<1
5-1 (U4;5.5-8.5 IN INTO LINER)	<1
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	<1
5-1 (S6B;1-2 FT BELOW LINER)	<1
5-1 (S7 ;2-4 FT BELOW LINER)	<1
5-1 (S8 ;4-5 FT BELOW LINER)	<1

PLANT FIVE
SOLID CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	18
5-1 (20.5-22.5 FT)	19
5-1 (24-26.5 FT)	20
5-2 (6.5-9 FT)	19
5-2 (10.5-12.5 FT)	18
5-3 (22-24 FT)	9
5-3 (31-32.5 FT)	16
5-13(SURFACE)	<5
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	<5
5-1 (U4;5.5-8.5 IN INTO LINER)	<5
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	11
5-1 (S6B;1-2 FT BELOW LINER)	12
5-1 (S7 ;2-4 FT BELOW LINER)	7
5-1 (S8 ;4-5 FT BELOW LINER)	6

PLANT FIVE
SOLID CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	7.7
5-1 (20.5-22.5 FT)	9.1
5-1 (24-26.5 FT)	10.6
5-2 (6.5-9 FT)	4.7
5-2 (10.5-12.5 FT)	1.4
5-3 (22-24 FT)	<0.8
5-3 (31-32.5 FT)	<0.8
5-13(SURFACE)	87.4
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	53
5-1 (U4;5.5-8.5 IN INTO LINER)	158
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	79
5-1 (S6B;1-2 FT BELOW LINER)	53
5-1 (S7 ;2-4 FT BELOW LINER)	117
5-1 (S8 ;4-5 FT BELOW LINER)	66

PLANT FIVE
SOLID CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	84
5-1 (20.5-22.5 FT)	76.9
5-1 (24-26.5 FT)	96.4
5-2 (6.5-9 FT)	44.9
5-2 (10.5-12.5 FT)	58.6
5-3 (22-24 FT)	48.6
5-3 (31-32.5 FT)	53.3
5-13(SURFACE)	55.3
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	18.6
5-1 (U4;5.5-8.5 IN INTO LINER)	20
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	17.1
5-1 (S6B;1-2 FT BELOW LINER)	20.1
5-1 (S7 ;2-4 FT BELOW LINER)	19.5
5-1 (S8 ;4-5 FT BELOW LINER)	25.2

PLANT FIVE
SOLID CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	15100
5-1 (20.5-22.5 FT)	15200
5-1 (24-26.5 FT)	17400
5-2 (6.5-9 FT)	12300
5-2 (10.5-12.5 FT)	15100
5-3 (22-24 FT)	43000
5-3 (31-32.5 FT)	42700
5-13(SURFACE)	22300
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	22900
5-1 (U4;5.5-8.5 IN INTO LINER)	24200
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	24000
5-1 (S6B;1-2 FT BELOW LINER)	24500
5-1 (S7 ;2-4 FT BELOW LINER)	23900
5-1 (S8 ;4-5 FT BELOW LINER)	26100

PLANT FIVE
SOLID CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	7200
5-1 (20.5-22.5 FT)	7000
5-1 (24-26.5 FT)	8100
5-2 (6.5-9 FT)	3600
5-2 (10.5-12.5 FT)	4600
5-3 (22-24 FT)	3000
5-3 (31-32.5 FT)	4600
5-13(SURFACE)	6800
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	14900
5-1 (U4;5.5-8.5 IN INTO LINER)	15900
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	20200
5-1 (S6B;1-2 FT BELOW LINER)	17000
5-1 (S7 ;2-4 FT BELOW LINER)	16500
5-1 (S8 ;4-5 FT BELOW LINER)	18300

PLANT FIVE
SOLID CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	[illegible]000
5-1 (20.5-22.5 FT)	15000
5-1 (24-26.5 FT)	20100
5-2 (6.5-9 FT)	13500
5-2 (10.5-12.5 FT)	17100
5-3 (22-24 FT)	13600
5-3 (31-32.5 FT)	15100
5-13(SURFACE)	6070
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	5320
5-1 (U4;5.5-8.5 IN INTO LINER)	6940
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	7450
5-1 (S6B;1-2 FT BELOW LINER)	9670
5-1 (S7 ;2-4 FT BELOW LINER)	8170
5-1 (S8 ;4-5 FT BELOW LINER)	8720

PLANT FIVE
SOLID CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	948
5-1 (20.5-22.5 FT)	890
5-1 (24-26.5 FT)	1310
5-2 (6.5-9 FT)	633
5-2 (10.5-12.5 FT)	782
5-3 (22-24 FT)	738
5-3 (31-32.5 FT)	908
5-13(SURFACE)	764
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	528
5-1 (U4;5.5-8.5 IN INTO LINER)	622
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	1010
5-1 (S6B;1-2 FT BELOW LINER)	339
5-1 (S7 ;2-4 FT BELOW LINER)	342
5-1 (S8 ;4-5 FT BELOW LINER)	372

PLANT FIVE
SOLID CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	<30
5-1 (20.5-22.5 FT)	<30
5-1 (24-26.5 FT)	<30
5-2 (6.5-9 FT)	<30
5-2 (10.5-12.5 FT)	<30
5-3 (22-24 FT)	<30
5-3 (31-32.5 FT)	<30
5-13(SURFACE)	<30
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	<30
5-1 (U4;5.5-8.5 IN INTO LINER)	<30
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	30
5-1 (S6B;1-2 FT BELOW LINER)	40
5-1 (S7 ;2-4 FT BELOW LINER)	<30
5-1 (S8 ;4-5 FT BELOW LINER)	<30

PLANT FIVE
SOLID CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	16600
5-1 (20.5-22.5 FT)	14900
5-1 (24-26.5 FT)	15200
5-2 (6.5-9 FT)	11300
5-2 (10.5-12.5 FT)	10600
5-3 (22-24 FT)	2000
5-3 (31-32.5 FT)	2600
5-13(SURFACE)	6600
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	14400
5-1 (U4;5.5-8.5 IN INTO LINER)	13100
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	15800
5-1 (S6B;1-2 FT BELOW LINER)	11800
5-1 (S7 ;2-4 FT BELOW LINER)	12200
5-1 (S8 ;4-6 FT BELOW LINER)	11400

PLANT FIVE
SOLID CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	49
5-1 (20.5-22.5 FT)	39
5-1 (24-26.5 FT)	59
5-2 (6.5-9 FT)	37
5-2 (10.5-12.5 FT)	42
5-3 (22-24 FT)	37
5-3 (31-32.5 FT)	43
5-13(SURFACE)	18
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	22
5-1 (U4;5.5-8.5 IN INTO LINER)	21
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	28
5-1 (S6B;1-2 FT BELOW LINER)	20
5-1 (S7 ;2-4 FT BELOW LINER)	18
5-1 (S8 ;4-5 FT BELOW LINER)	20

PLANT FIVE
SOLID CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	1730
5-1 (20.5-22.5 FT)	1750
5-1 (24-26.5 FT)	2020
5-2 (6.5-9 FT)	1210
5-2 (10.5-12.5 FT)	1140
5-3 (22-24 FT)	850
5-3 (31-32.5 FT)	1010
5-13(SURFACE)	520
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	480
5-1 (U4;5.5-8.5 IN INTO LINER)	430
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	470
5-1 (S6B;1-2 FT BELOW LINER)	400
5-1 (S7 ;2-4 FT BELOW LINER)	380
5-1 (S8 ;4-5 FT BELOW LINER)	420

PLANT FIVE
SOLID CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	50
5-1 (20.5-22.5 FT)	65
5-1 (24-26.5 FT)	70
5-2 (6.5-9 FT)	30
5-2 (10.5-12.5 FT)	40
5-3 (22-24 FT)	20
5-3 (31-32.5 FT)	20
5-13(SURFACE)	35
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	5
5-1 (U4;5.5-8.5 IN INTO LINER)	10
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	5
5-1 (S6B;1-2 FT BELOW LINER)	5
5-1 (S7 ;2-4 FT BELOW LINER)	10
5-1 (S8 ;4-5 FT BELOW LINER)	5

PLANT FIVE
SOLID CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	2820
5-1 (20.5-22.5 FT)	2860
5-1 (24-26.5 FT)	3230
5-2 (6.5-9 FT)	1850
5-2 (10.5-12.5 FT)	1990
5-3 (22-24 FT)	1940
5-3 (31-32.5 FT)	1820
5-13(SURFACE)	2580
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	196
5-1 (U4;5.5-8.5 IN INTO LINER)	171
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	216
5-1 (S6B;1-2 FT BELOW LINER)	140
5-1 (S7 ;2-4 FT BELOW LINER)	136
5-1 (S8 ;4-5 FT BELOW LINER)	125

PLANT FIVE
SOLID CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	<1
5-1 (20.5-22.5 FT)	3
5-1 (24-26.5 FT)	1
5-2 (6.5-9 FT)	<1
5-2 (10.5-12.5 FT)	<1
5-3 (22-24 FT)	<1
5-3 (31-32.5 FT)	<1
5-13(SURFACE)	<1
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	6
5-1 (U4;5.5-8.5 IN INTO LINER)	5
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	11
5-1 (S6B;1-2 FT BELOW LINER)	14
5-1 (S7 ;2-4 FT BELOW LINER)	10
5-1 (S8 ;4-5 FT BELOW LINER)	10

PLANT FIVE
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	4860
5-1 (20.5-22.5 FT)	4950
5-1 (24-26.5 FT)	5470
5-2 (6.5-9 FT)	2920
5-2 (10.5-12.5 FT)	4040
5-3 (22-24 FT)	3530
5-3 (31-32.5 FT)	3900
5-13(SURFACE)	3750
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	2370
5-1 (U4;5.5-8.5 IN INTO LINER)	2450
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	2020
5-1 (S6B;1-2 FT BELOW LINER)	3230
5-1 (S7 ;2-4 FT BELOW LINER)	3020
5-1 (S8 ;4-5 FT BELOW LINER)	3540

PLANT FIVE
SOLID CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	71.5
5-1 (20.5-22.5 FT)	74.9
5-1 (24-26.5 FT)	86.9
5-2 (6.5-9 FT)	35.8
5-2 (10.5-12.5 FT)	50.4
5-3 (22-24 FT)	36.6
5-3 (31-32.5 FT)	42.2
5-13(SURFACE)	73.8
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	76.4
5-1 (U4;5.5-8.5 IN INTO LINER)	79.1
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	69.6
5-1 (S6B;1-2 FT BELOW LINER)	72.8
5-1 (S7 ;2-4 FT BELOW LINER)	69.3
5-1 (S8 ;4-5 FT BELOW LINER)	69.5

PLANT FIVE
SOLID CONCENTRATION OF 31 ZINC PPM

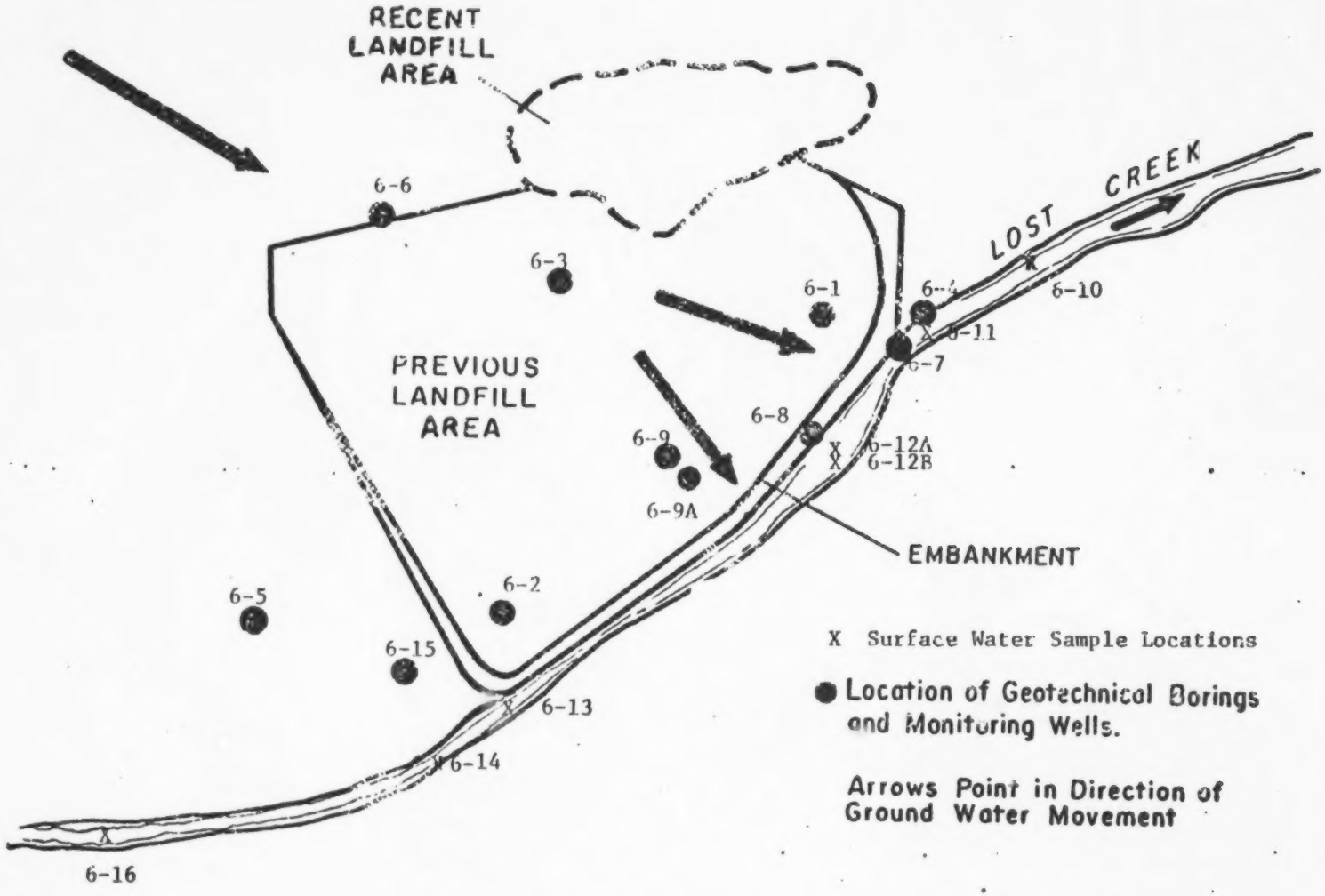
SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	75
5-1 (20.5-22.5 FT)	67
5-1 (24-26.5 FT)	87
5-2 (6.5-9 FT)	44
5-2 (10.5-12.5 FT)	50
5-3 (22-24 FT)	45
5-3 (31-32.5 FT)	62
5-13(SURFACE)	16
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	45
5-1 (U4;5.5-8.5 IN INTO LINER)	45
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	45
5-1 (S6B;1-2 FT BELOW LINER)	31
5-1 (S7 ;2-4 FT BELOW LINER)	32
5-1 (S8 ;4-5 FT BELOW LINER)	34

PLANT FIVE
SOLID CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	82181
WASTE SOLIDS	
5-1 (12.5-14.5 FT)	195
5-1 (20.5-22.5 FT)	188
5-1 (24-26.5 FT)	216
5-2 (6.5-9 FT)	141
5-2 (10.5-12.5 FT)	172
5-3 (22-24 FT)	174
5-3 (31-32.5 FT)	194
5-13(SURFACE)	192
LINER SOLIDS:	
5-3 (19-25 IN INTO LINER)	108
5-1 (U4;5.5-8.5 IN INTO LINER)	102
SOIL SOLIDS UNDER LINER:	
5-1 (S6A;0-1 FT BELOW LINER)	69
5-1 (S6B;1-2 FT BELOW LINER)	123
5-1 (S7 ;2-4 FT BELOW LINER)	108
5-1 (S8 ;4-5 FT BELOW LINER)	124

Powerton

POWERTON STATION SITE



PLANT SIX

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		643	917	1313
6-6 (43-45 FT)	619			
PERIPHERAL:				
6-5		641	916	1306
6-15 (HA-1)		651	SP	
IN WASTE:				
6-9		649	926	1317
DOWNGRADIENT:				
6-4		640	915	1305
6-7		645	921	1314
6-8		646	922	1315
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		658	931	1322
6-14		659	933	1323
6-16			934	1325
MIDDLE OF SITE:				
6-12		655	929	1321
6-11		654	928	1319
DOWNGRADIENT:				
6-10		653	927	1318
OTHER				
SD	636			

PLANT SIX
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		1.6	0.1	0.2
6-6 (43-45 FT)	<0.3			
PERIPHERAL:				
6-5		0.3	0.3	0.2
6-15 (HA-1)		0.3	SP	
IN WASTE:				
6-9		<0.1	1.8	1.6
DOWNGRADIENT:				
6-4		0.5	0.3	<1
6-7		0.7	0.3	0.3
6-8		0.9	1	3.3
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		2.5	0.3	<1
6-14		0.3	0.3	<1
6-16			0.3	<1
MIDDLE OF SITE:				
6-12		1.4	0.3	<1
6-11		1.3	0.3	<1
DOWNGRADIENT:				
6-10		2.5	0.3	<1
OTHER				
SD	0.2			

PLANT SIX
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		22.8	23.4	20.8
6-6 (43-45 FT)	29.2			
PERIPHERAL:				
6-5		2	1.5	2.4
6-15 (HA-1)		9.7	SP	
IN WASTE:				
6-9		24.7	22.4	24.2
DOWNGRADIENT:				
6-4		23	27	20.2
6-7		3.7	2.1	6.3
6-8		27.3	11.7	17.7
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		26.1	33.1	19.1
6-14		29.9	35.4	19.6
6-16			34.3	17.5
MIDDLE OF SITE:				
6-12		23.5	28.3	19.1
6-11		24.5	28.3	20.3
DOWNGRADIENT:				
6-10		22.3	27.1	22.9
OTHER				
SD	20.7			

PLANT SIX
CONCENTRATION OF 3 NITRATE PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		39.8	48	49.9
6-6 (43-45 FT)	26.9			
PERIPHERAL:				
6-5		10.1	7	12.2
6-15 (HA-1)		9.5	SP	
IN WASTE:				
6-9		76.5	10.7	38.1
DOWNGRADIENT:				
6-4		14.5	27	34.4
6-7		<0.6	1	2.5
6-8		<0.6	<0.6	<6
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		AP	33	48.3
6-14		15.8	32	50
6-16			33	54.3
MIDDLE OF SITE:				
6-12		18.2	31.3	50
6-11		24.4	31.1	52.6
DOWNGRADIENT:				
6-10		31	31.1	50.9
OTHER				
SD	17.5			

PLANT SIX
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		54.2	58	51
6-6 (43-45 FT)	54			
PERIPHERAL:				
6-5		34	25	23.8
6-15 (HA-1)		11.5	SP	
IN WASTE:				
6-9		593	625	904.1
DOWNGRADIENT:				
6-4		324	335	597.8
6-7		159	120	201.8
6-8		668	335	527.6
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		63	60.4	83.7
6-14		72.4	60	83.7
6-16			60.4	78
MIDDLE OF SITE:				
6-12		71.8	59.6	84.7
6-11		75.4	58.4	91.4
DOWNGRADIENT:				
6-10		75	58.4	96.2
OTHER				
SD	84			

PLANT SIX
CONCENTRATION OF 5 PHOSPHATE PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.3	<0.3	<0.3
6-6 (43-45 FT)	<0.3			
PERIPHERAL:				
6-5		<0.3	<0.3	<0.3
6-15 (HA-1)		<0.3	SP	
IN WASTE:				
6-9		<0.3	<0.3	<3
DOWNGRADIENT:				
6-4		<0.3	<3	<3
6-7		<0.3	<0.3	<0.3
6-8		<0.3	<3	<3
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.3	<0.3	<3
6-14		<0.3	<0.3	<3
6-16			<0.3	<3
MIDDLE OF SITE:				
6-12		<0.3	<0.3	<3
6-11		<0.3	<0.3	<3
DOWNGRADIENT:				
6-10		<0.3	<0.3	<3
OTHER				
SD	<0.3			

PLANT SIX
CONCENTRATION OF 6 BROMIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.3	<0.3	<0.3
6-6 (43-45 FT)	<0.3			
PERIPHERAL:				
6-5		<0.3	<0.3	<0.3
6-15 (HA-1)		<0.3	SP	
IN WASTE:				
6-9		<0.3	<0.3	<3
DOWNGRADIENT:				
6-4		<0.3	<3	<3
6-7		<0.3	<0.3	<0.3
6-8		<0.3	<3	<3
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.3	<0.3	<3
6-14		<0.3	<0.3	<3
6-16			<0.3	<3
MIDDLE OF SITE:				
6-12		<0.3	<0.3	<3
6-11		<0.3	<0.3	<3
DOWNGRADIENT:				
6-10		<0.3	<0.3	<3
OTHER				
SD	<0.3			

PLANT SIX
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS			
	112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.005	<0.005	<0.005
6-6 (43-45 FT)	<0.005			
PERIPHERAL:				
6-5		<0.005	<0.005	<0.005
6-15 (HA-1)		<0.005	SP	
IN WASTE:				
6-9		<0.005	<0.005	<0.005
DOWNGRADIENT:				
6-4		<0.005	<0.005	<0.005
6-7		<0.005	<0.005	<0.005
6-8		<0.005	<0.005	<0.005
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.005	<0.005	<0.005
6-14		<0.005	<0.005	<0.005
6-16			<0.005	<0.005
MIDDLE OF SITE:				
6-12		<0.005	<0.005	<0.005
6-11		<0.005	<0.005	<0.005
DOWNGRADIENT:				
6-10		<0.005	<0.005	<0.005
OTHER				
SD	<0.005			

PLANT SIX
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.01	<0.01	<0.01
6-6 (43-45 FT)	<0.3			
PERIPHERAL:				
6-5		<0.3	<0.3	<0.3
6-15 (HA-1)		<0.01	SP	
IN WASTE:				
6-9		<0.01	<0.3	0.08
DOWNGRADIENT:				
6-4		<0.01	<0.01	<0.01
6-7		0.04	<0.01	0.22
6-8		0.12	0.01	0.29
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.3	<0.3	<0.3
6-14		<0.3	<0.3	<0.3
6-16			<0.3	<0.3
MIDDLE OF SITE:				
6-12		<0.3	<0.3	<0.3
6-11		<0.3	<0.3	<0.3
DOWNGRADIENT:				
6-10		<0.01	<0.3	<0.3
OTHER				
SD	<0.3			

PLANT SIX
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		0.252	0.222	0.247
6-6 (43-45 FT)	0.368			
PERIPHERAL:				
6-5		0.477	0.382	0.439
6-15 (HA-1)		0.632	SP	
IN WASTE:				
6-9		15.9	20.9	36.5
DOWNGRADIENT:				
6-4		9.37	11.4	18.1
6-7		2.88	2.56	2.09
6-8		14.9	5.6	12.5
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.093	0.04	0.234
6-14		0.097	0.022	0.192
6-16			0.027	0.179
MIDDLE OF SITE:				
6-12		0.106	0.053	0.355
6-11		0.253	0.058	0.582
DOWNGRADIENT:				
6-10		0.437	0.11	0.783
OTHER				
SD	0.121			

PLANT SIX
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		0.041	0.027	0.03
6-6 (43-45 FT)	0.081			
PERIPHERAL:				
6-5		0.018	0.015	0.015
6-15 (HA-1)		0.09	SP	
IN WASTE:				
6-9		0.042	0.04	0.047
DOWNGRADIENT:				
6-4		0.096	0.077	0.071
6-7		0.129	0.065	0.073
6-8		0.142	0.119	0.198
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.066	0.061	0.078
6-14		0.068	0.06	0.078
6-16			0.068	0.085
MIDDLE OF SITE:				
6-12		0.069	0.062	0.078
6-11		0.074	0.062	0.084
DOWNGRADIENT:				
6-10		0.08	0.061	0.085
OTHER				
SD	0.066			

PLANT SIX
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.0005	<0.0005	<0.0005
6-6 (43-45 FT)	<0.0005			
PERIPHERAL:				
6-5		<0.0005	<0.0005	<0.0005
6-15 (HA-1)		<0.0005	SP	
IN WASTE:				
6-9		<0.0005	<0.0005	<0.0005
DOWNGRADIENT:				
6-4		<0.0005	<0.0005	<0.0005
6-7		<0.0005	<0.0005	<0.0005
6-8		<0.0005	<0.0005	<0.0005
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.0005	<0.0005	<0.0005
6-14		<0.0005	<0.0005	<0.0005
6-16			<0.0005	<0.0005
MIDDLE OF SITE:				
6-12		<0.0005	<0.0005	<0.0005
6-11		<0.0005	<0.0005	<0.0005
DOWNGRADIENT:				
6-10		<0.0005	<0.0005	<0.0005
OTHER				
SD	<0.0005			

PLANT SIX
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		103	104	103
6-6 (43-45 FT)	89.5			
PERIPHERAL:				
6-5		95.7	86.5	81.8
6-15 (HA-1)		104	SP	
IN WASTE:				
6-9		125	96.1	126
DOWNGRADIENT:				
6-4		111	109	137
6-7		236	159	206
6-8		247	234	194
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		96.6	86.7	76.8
6-14		95.7	87.1	74.1
6-16			85.6	88.5
MIDDLE OF SITE:				
6-12		99.9	84.5	77.2
6-11		96.8	82.4	83.1
DOWNGRADIENT:				
6-10		104	83.3	89.5
OTHER				
SD	79.8			

PLANT SIX
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		0.01	<0.01	<0.01
6-6 (43-45 FT)	0.01			
PERIPHERAL:				
6-5		0.02	<0.01	<0.01
6-15 (HA-1)		0.02	SP	
IN WASTE:				
6-9		0.02	0.02	0.01
DOWNGRADIENT:				
6-4		0.02	0.02	<0.01
6-7		0.03	0.02	0.01
6-8		0.02	0.02	0.01
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.02	<0.01	<0.01
6-14		0.02	0.02	<0.01
6-16			0.02	0.01
MIDDLE OF SITE:				
6-12		0.02	0.02	<0.01
6-11		0.01	0.02	<0.01
DOWNGRADIENT:				
6-10		0.01	0.02	<0.01
OTHER				
SD	<0.01			

PLANT SIX
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.05	<0.05	<0.05
6-6 (43-45 FT)	0.06			
PERIPHERAL:				
6-5		<0.05	<0.05	<0.05
6-15 (HA-1)		0.11	SP	
IN WASTE:				
6-9		<0.05	<0.05	0.06
DOWNGRADIENT:				
6-4		<0.05	<0.05	<0.05
6-7		0.08	<0.05	<0.05
6-8		0.1	<0.05	<0.05
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.05	<0.05	<0.05
6-14		<0.05	<0.05	0.05
6-16			<0.05	<0.05
MIDDLE OF SITE:				
6-12		0.11	<0.05	<0.05
6-11		0.13	<0.05	<0.05
DOWNGRADIENT:				
6-10		0.13	<0.05	<0.05
OTHER				
SD	<0.05			

PLANT SIX
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.01	0.02	0.01
6-6 (43-45 FT)	<0.01			
PERIPHERAL:				
6-5		<0.01	0.02	<0.01
6-15 (HA-1)		<0.01	SP	
IN WASTE:				
6-9		<0.01	0.02	0.02
DOWNGRADIENT:				
6-4		<0.01	0.01	0.01
6-7		<0.01	0.02	0.01
6-8		<0.01	<0.01	0.02
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.01	0.01	0.01
6-14		<0.01	0.01	0.02
6-16			0.01	0.01
MIDDLE OF SITE:				
6-12		<0.01	0.02	0.01
6-11		<0.01	0.01	<0.01
DOWNGRADIENT:				
6-10		<0.01	0.01	<0.01
OTHER				
SD	<0.01			

PLANT SIX
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.008	<0.008	<0.008
6-6 (43-45 FT)	0.01			
PERIPHERAL:				
6-5		<0.008	<0.008	<0.008
6-15 (HA-1)		0.009	SP	
IN WASTE:				
6-9		0.037	0.112	0.024
DOWNGRADIENT:				
6-4		<0.008	<0.008	<0.008
6-7		0.051	0.01	<0.008
6-8		0.012	0.01	<0.008
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.013	<0.008	<0.008
6-14		<0.008	<0.008	<0.008
6-16			<0.008	<0.008
MIDDLE OF SITE:				
6-12		0.01	<0.008	<0.008
6-11		0.01	<0.008	<0.008
DOWNGRADIENT:				
6-10		0.011	<0.008	<0.008
OTHER				
SD	<0.008			

PLANT SIX
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS			
WELLS	112381	121481	41982	80282
BACKGROUND:				
6-6				
6-6 (43-45 FT)	<0.01	<0.01	0.05	0.05
PERIPHERAL:				
6-5		<0.01	0.05	<0.01
6-15 (HA-1)		0.05	SP	
IN WASTE:				
6-9		0.04	0.09	0.08
DOWNGRADIENT:				
6-4		<0.01	0.1	0.02
6-7		12.3	0.95	12.6
6-8		0.1	0.28	0.33
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.03	0.06	0.13
6-14		0.02	0.05	0.06
6-16			0.05	0.06
MIDDLE OF SITE:				
6-12		0.07	0.06	0.05
6-11		0.06	0.05	0.05
DOWNGRADIENT:				
6-10		0.05	0.06	0.05
OTHER				
SD	<0.01			

PLANT SIX
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		1	1	<1
6-6 (43-45 FT)	5			
PERIPHERAL:				
6-5		2	1	<1
6-15 (HA-1)		3	SP	
IN WASTE:				
6-9		22	17	38
DOWNGRADIENT:				
6-4		9	8	7
6-7		4	4	1
6-8		5	2	1
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		2	<1	2
6-14		2	<1	3
6-16			<1	2
MIDDLE OF SITE:				
6-12		3	<1	3
6-11		3	<1	2
DOWNGRADIENT:				
6-10		4	<1	3
OTHER				
SD	3			

PLANT SIX
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		34.8	39.4	36.7
6-6 (43-45 FT)	37.9			
PERIPHERAL:				
6-5		24.7	23.1	19.2
6-15 (HA-1)		26.9	SP	
IN WASTE:				
6-9		41.9	39.5	58.5
DOWNGRADIENT:				
6-4		39	50.6	55
6-7		62	38.9	66
6-8		72.2	67.7	51.8
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		45.4	41.3	38.3
6-14		45.7	40.4	36.2
6-16			39.5	37.3
MIDDLE OF SITE:				
6-12		46	38.6	37.8
6-11		42.5	38.5	38.1
DOWNGRADIENT:				
6-10		45.2	39.2	38.6
OTHER				
SD	44.2			

PLANT SIX
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		0.18	<0.01	<0.01
6-6 (43-45 FT)	0.55			
PERIPHERAL:				
6-5		0.01	<0.01	<0.01
6-15 (HA-1)		3.08	SP	
IN WASTE:				
6-9		0.3	0.05	0.3
DOWNGRADIENT:				
6-4		2.66	1.74	2.44
6-7		5.4	1.52	4.97
6-8		5.13	6.66	9.72
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.05	<0.01	0.03
6-14		0.04	<0.01	0.03
6-16			<0.01	0.05
MIDDLE OF SITE:				
6-12		0.04	<0.01	0.04
6-11		0.09	<0.01	0.05
DOWNGRADIENT:				
6-10		0.11	<0.01	0.06
OTHER				
SD	<0.01			

PLANT SIX
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.3	<0.3	<0.3
6-6 (43-45 FT)	<0.3			
PERIPHERAL:				
6-5		<0.3	<0.3	<0.3
6-15 (HA-1)		<0.3	SP	
IN WASTE:				
6-9		0.9	1.1	1.7
DOWNGRADIENT:				
6-4		0.3	0.3	0.3
6-7		<0.3	<0.3	<0.3
6-8		<0.3	<0.3	<0.3
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.3	<0.3	<0.3
6-14		<0.3	<0.3	<0.3
6-16			<0.3	<0.3
MIDDLE OF SITE:				
6-12		<0.3	<0.3	<0.3
6-11		<0.3	<0.3	<0.3
DOWNGRADIENT:				
6-10		<0.3	<0.3	<0.3
OTHER				
SD	<0.3			

PLANT SIX
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		8	11	9
6-6 (43-45 FT)	14			
PERIPHERAL:				
6-5		6	5	4
6-15 (HA-1)		6	SP	
IN WASTE:				
6-9		158	260	248
DOWNGRADIENT:				
6-4		95	107	178
6-7		37	19	28
6-8		109	51	95
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		13	18	11
6-14		13	18	9
6-16			18	8
MIDDLE OF SITE:				
6-12		13	18	11
6-11		13	18	13
DOWNGRADIENT:				
6-10		15	19	14
OTHER				
SD	13			

PLANT SIX
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.05	0.07	<0.05
6-6 (43-45 FT)	<0.05			
PERIPHERAL:				
6-5		0.05	0.06	<0.05
6-15 (HA-1)		0.06	SP	
IN WASTE:				
6-9		0.06	0.12	0.06
DOWNGRADIENT:				
6-4		0.06	0.07	<0.05
6-7		0.09	0.08	<0.05
6-8		0.07	0.12	0.05
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.05	0.06	<0.05
6-14		<0.05	0.06	<0.05
6-16			0.05	<0.05
MIDDLE OF SITE:				
6-12		0.07	0.06	<0.05
6-11		<0.05	0.06	<0.05
DOWNGRADIENT:				
6-10		0.05	0.05	<0.05
OTHER				
SD	<0.05			

PLANT SIX
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.6	0.6	<0.6
6-6 (43-45 FT)	<0.6			
PERIPHERAL:				
6-5		<0.6	0.7	<0.6
6-15 (HA-1)		<0.6	SP	
IN WASTE:				
6-9		0.6	0.8	0.8
DOWNGRADIENT:				
6-4		<0.6	0.8	<0.6
6-7		0.8	0.7	0.7
6-8		0.6	1	0.7
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.6	0.7	<0.6
6-14		<0.6	0.7	<0.6
6-16			0.7	<0.6
MIDDLE OF SITE:				
6-12		<0.6	0.7	<0.6
6-11		<0.6	0.7	<0.6
DOWNGRADIENT:				
6-10		<0.6	0.7	<0.6
OTHER				
SD	<0.6			

Note: IC data on $PO_4^{\equiv}$

PLANT SIX
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.05	<0.05	<0.05
6-6 (43-45 FT)	<0.05			
PERIPHERAL:				
6-5		<0.05	<0.05	<0.05
6-15 (HA-1)		0.05	SP	
IN WASTE:				
6-9		<0.05	<0.05	<0.05
DOWNGRADIENT:				
6-4		<0.05	<0.05	0.2
6-7		<0.05	<0.05	<0.05
6-8		<0.05	<0.05	<0.05
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.05	<0.05	<0.05
6-14		<0.05	<0.05	<0.05
6-16			<0.05	<0.05
MIDDLE OF SITE:				
6-12		<0.05	<0.05	<0.05
6-11		<0.05	<0.05	<0.05
DOWNGRADIENT:				
6-10		<0.05	<0.05	<0.05
OTHER				
SD	<0.05			

PLANT SIX
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		6.05	3.52	8.1
6-6 (43-45 FT)	2.73			
PERIPHERAL:				
6-5		5.2	3.32	6.5
6-15 (HA-1)		6.65	SP	
IN WASTE:				
6-9		3.76	<0.05	5.27
DOWNGRADIENT:				
6-4		3.6	2.53	5.96
6-7		9.12	3.28	11
6-8		4.9	3.44	8.81
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.91	<0.05	3.57
6-14		0.75	1.59	3.07
6-16			1.59	4.97
MIDDLE OF SITE:				
6-12		2.62	2.07	3.48
6-11		1.77	2.07	4.44
DOWNGRADIENT:				
6-10		2.07	2.07	4.78
OTHER				
SD	0.97			

PLANT SIX
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		0.041	0.029	0.054
6-6 (43-45 FT)	0.086			
PERIPHERAL:				
6-5		0.082	0.063	0.079
6-15 (HA-1)		0.115	SP	
IN WASTE:				
6-9		0.222	0.157	0.251
DOWNGRADIENT:				
6-4		0.17	0.41	0.496
6-7		0.145	0.133	0.161
6-8		0.176	0.155	0.246
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.105	0.062	0.081
6-14		0.106	0.062	0.082
6-16			0.076	0.086
MIDDLE OF SITE:				
6-12		0.1	0.063	0.083
6-11		0.104	0.063	0.094
DOWNGRADIENT:				
6-10		0.106	0.077	0.094
OTHER				
SD	0.084			

PLANT SIX
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.01	0.04	0.01
6-6 (43-45 FT)	0.02			
PERIPHERAL:				
6-5		0.01	0.02	0.01
6-15 (HA-1)		0.04	SP	
IN WASTE:				
6-9		<0.01	0.02	0.04
DOWNGRADIENT:				
6-4		<0.01	0.03	0.02
6-7		0.01	0.03	<0.01
6-8		0.04	0.04	0.03
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.02	<0.01	0.05
6-14		<0.01	<0.01	0.04
6-16			<0.01	0.03
MIDDLE OF SITE:				
6-12		0.05	<0.01	0.03
6-11		0.06	<0.01	0.02
DOWNGRADIENT:				
6-10		0.06	<0.01	0.02
OTHER				
SD	<0.01			

Note: Values greater than detection limit are not likely to be real since blanks ranged from <0.01 to 0.05 ppm in the program.

PLANT SIX
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.005	<0.005	<0.005
6-6 (43-45 FT)	<0.005			
PERIPHERAL:				
6-5		<0.005	<0.005	<0.005
6-15 (HA-1)		<0.005	SP	
IN WASTE:				
6-9		<0.005	<0.005	<0.005
DOWNGRADIENT:				
6-4		<0.005	<0.005	<0.005
6-7		<0.005	<0.005	<0.005
6-8		<0.005	<0.005	<0.005
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.005	<0.005	<0.005
6-14		<0.005	<0.005	<0.005
6-16			<0.005	<0.005
MIDDLE OF SITE:				
6-12		<0.005	<0.005	<0.005
6-11		<0.005	<0.005	<0.005
DOWNGRADIENT:				
6-10		<0.005	<0.005	<0.005
OTHER				
SD	<0.005			

PLANT SIX
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.005	0.006	0.011
6-6 (43-45 FT)	<0.005			
PERIPHERAL:				
6-5		<0.005	<0.005	<0.005
6-15 (HA-1)		<0.005	SP	
IN WASTE:				
6-9		<0.005	0.027	0.025
DOWNGRADIENT:				
6-4		<0.005	0.007	0.011
6-7		<0.005	0.023	<0.005
6-8		<0.005	0.03	0.009
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.005	<0.005	0.013
6-14		<0.005	0.017	0.015
6-16			0.017	0.014
MIDDLE OF SITE:				
6-12		<0.005	0.017	0.013
6-11		<0.005	<0.005	0.012
DOWNGRADIENT:				
6-10		<0.005	0.017	0.015
OTHER				
SD	<0.005			

PLANT SIX
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS			
	112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.05	<0.05	<0.05
6-6 (43-45 FT)	<0.05			
PERIPHERAL:				
6-5		<0.05	<0.05	<0.05
6-15 (HA-1)		<0.05	SP	
IN WASTE:				
6-9		0.1	<0.05	<0.05
DOWNGRADIENT:				
6-4		0.08	<0.05	<0.05
6-7		<0.05	<0.05	<0.05
6-8		0.08	<0.05	<0.05
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.05	<0.05	<0.05
6-14		0.05	<0.05	<0.05
6-16			<0.05	<0.05
MIDDLE OF SITE:				
6-12		<0.05	<0.05	<0.05
6-11		<0.05	<0.05	<0.05
DOWNGRADIENT:				
6-10		<0.05	<0.05	<0.05
OTHER				
SD	<0.05			

PLANT SIX
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.05	<0.05	<0.05
6-6 (43-45 FT)	<0.05			
PERIPHERAL:				
6-5		<0.05	<0.05	<0.05
6-15 (HA-1)		<0.05	SP	
IN WASTE:				
6-9		<0.05	<0.05	<0.05
DOWNGRADIENT:				
6-4		<0.05	<0.05	<0.05
6-7		<0.05	<0.05	<0.05
6-8		<0.05	<0.05	<0.05
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.05	<0.05	<0.05
6-14		<0.05	<0.05	<0.05
6-16			<0.05	<0.05
MIDDLE OF SITE:				
6-12		<0.05	<0.05	<0.05
6-11		<0.05	<0.05	<0.05
DOWNGRADIENT:				
6-10		<0.05	<0.05	<0.05
OTHER				
SD	<0.05			

PLANT SIX
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.2		0.3
6-6 (43-45 FT)				
PERIPHERAL:				
6-5		<0.2	0.4	<0.1
6-15 (HA-1)		0.3	SP	
IN WASTE:				
6-9		0.9	0.7	1.1
DOWNGRADIENT:				
6-4		<0.2	0.5	<0.1
6-7		19.5	1.4	12.7
6-8		<0.2		
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		0.4		
6-14		0.6		
6-16				
MIDDLE OF SITE:				
6-12		0.5		
6-11		0.5		
DOWNGRADIENT:				
6-10		0.5		
OTHER				
SD				

PLANT SIX
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		<0.2		<0.1
6-6 (43-45 FT)				
PERIPHERAL:				
6-5		<0.2	<0.1	<0.1
6-15 (HA-1)		<0.2	SP	
IN WASTE:				
6-9		0.4	<0.1	0.3
DOWNGRADIENT:				
6-4		<0.2	<0.1	<0.1
6-7		<0.2	<0.1	0.3
6-8		<0.2		
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		<0.2		
6-14		<0.2		
6-16				
MIDDLE OF SITE:				
6-12		<0.2		
6-11		<0.2		
DOWNGRADIENT:				
6-10		<0.2		
OTHER				
SD				

PLANT SIX
CONCENTRATION OF 38 PH FIELD -

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		7.3	7.2	7.45
6-6 (43-45 FT)				
PERIPHERAL:				
6-5		7.6	7.1	7.9
6-15 (HA-1)		7.6	SP	
IN WASTE:				
6-9		7.8		7.5
DOWNGRADIENT:				
6-4		7.1	7.4	7.6
6-7		7	7.1	7
6-8		6	6.8	6.95
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		8.6	8.3	7.9
6-14		8.5	8.3	8
6-16			8.4	7.6
MIDDLE OF SITE:				
6-12		7.4	7.8	8.1
6-11		8.6	8	8.1
DOWNGRADIENT:				
6-10		7.05	8	8.5
OTHER				
SD				

PLANT SIX
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		790	760	775
6-6 (43-45 FT)				
PERIPHERAL:				
6-5		610	475	510
6-15 (HA-1)		660	SP	
IN WASTE:				
6-9		1450		2000
DOWNGRADIENT:				
6-4		1075	1240	1700
6-7		1490	950	1440
6-8		1810	1540	1690
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		740	710	675
6-14		660	730	800
6-16			690	690
MIDDLE OF SITE:				
6-12		760	750	600
6-11		700	725	675
DOWNGRADIENT:				
6-10		775	680	710
OTHER				
SD				

PLANT SIX
CONCENTRATION OF 41 GROUNDWATER LEVEL FT (Measured from top of casing)

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		40.1	39.3	39.7
6-6 (43-45 FT)				
PERIPHERAL:				
6-5		25.1	23.5	24.1
6-15 (HA-1)		3	SP	
IN WASTE:				
6-9		38.8	37.25	38.2
DOWNGRADIENT:				
6-4		8.3	5.75	7.2
6-7		10.9	9	
6-8		6.7	5.75	6.5
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13				
6-14				
6-16				
MIDDLE OF SITE:				
6-12				
6-11				
DOWNGRADIENT:				
6-10				
OTHER				
SD				

SUMMARY OF GROUNDWATER ELEVATIONS - POWERTON

(in feet to top of casing)*

ADL Well	TOC	Date 11/23/81	12/14/81	4/19/82	8/2/82
6-4	460.4	7.8(452.6)	8.3(452.1)	5.8(454.6)	7.2(453.2)
6-5	482.6	23.5(459.1)	25.1(457.5)	23.5(459.1)	24.1(458.5)
6-6	497.7	40.1(457.6)	40.1(457.6)	39.3(458.4)	39.7(458.0)
6-7	462.8	10.5(452.3)	10.9(451.9)	9.0(453.8)	-
6-8	460.3	6.4(453.9)	6.7(453.6)	5.8(454.5)	6.5(453.8)
6-9	493.7	-	38.8(454.9)	37.3(456.4)	38.2(455.5)
6-15(HA-1)	459.2	2.7(456.5)	3.0(456.2)	-	

*Values in parenthesis are feet relative to mean sea level.

TOC = Top of casing elevations in feet relative to mean sea level

PLANT SIX
CONCENTRATION OF 42 DISSOLVED OXYGEN PPM

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6		8.2-8.9	6.9	7.7
6-6 (43-45 FT)				
PERIPHERAL:				
6-5		8	6.3	5
6-15 (HA-1)		1.0-1.8	SP	
IN WASTE:				
6-9				5.1
DOWNGRADIENT:				
6-4		1.2-1.7	4.9	0.3
6-7		0.6	6.2	0.6
6-8		0.7	6.6	0.5
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13		14	10.6	8.4
6-14		6	11.2	8.9
6-16			8.9	8
MIDDLE OF SITE:				
6-12		14.2-15.0	8.4	11.2
6-11		13.5-14.0	10.2	10.1
DOWNGRADIENT:				
6-10		12.0-13.0	10.4	8.6
OTHER				
SD				

PLANT SIX
CONCENTRATION OF 60 LEAD-GRAPHITE FURNACE PPB

SAMPLING POINT DESIGNATION	TRIPS 112381	121481	41982	80282
WELLS				
BACKGROUND:				
6-6			<1	
6-6 (43-45 FT)				
PERIPHERAL:				
6-5			<1	
6-15 (HA-1)				
IN WASTE:				
6-9			2	
DOWNGRADIENT:				
6-4			<1	
6-7			<1	
6-8			<1	
SURFACE WATER (LOST CREEK)				
BACKGROUND:				
6-13			<1	
6-14			1	
6-16			<1	
MIDDLE OF SITE:				
6-12			<1	
6-11			<1	
DOWNGRADIENT:				
6-10			<1	
OTHER				
SD				

PLANT SIX

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	9589
6-1 (24-26 FT)	9591
6-1 (30-32 FT)	9593
6-2 (2-4 FT)	9597
6-2 (24-26 FT)	9598
6-2 (31-32 FT)	9599
6-3 (2-4 FT)	9603
6-3 (13-15 FT)	9604
6-9 (9-11 FT)	9626
6-9 (27-29 FT)	9629

PLANT SIX
SOLID CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	<0.5
6-1 (24-26 FT)	<0.5
6-1 (30-32 FT)	<0.5
6-2 (2-4 FT)	<0.5
6-2 (24-26 FT)	<0.5
6-2 (31-32 FT)	<0.5
6-3 (2-4 FT)	<0.5
6-3 (13-15 FT)	<0.5
6-9 (9-11 FT)	<0.5
6-9 (27-29 FT)	

PLANT SIX
SOLID CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	89300
6-1 (24-26 FT)	90900
6-1 (30-32 FT)	86100
6-2 (2-4 FT)	94900
6-2 (24-26 FT)	74900
6-2 (31-32 FT)	88400
6-3 (2-4 FT)	90200
6-3 (13-15 FT)	87300
6-9 (9-11 FT)	89200
6-9 (27-29 FT)	87400

PLANT SIX
SOLID CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	4.98
6-1 (24-26 FT)	9.54
6-1 (30-32 FT)	8.55
6-2 (2-4 FT)	6.81
6-2 (24-26 FT)	8.05
6-2 (31-32 FT)	11.2
6-3 (2-4 FT)	11
6-3 (13-15 FT)	12.5
6-9 (9-11 FT)	10.6
6-9 (27-29 FT)	17.2

PLANT SIX
SOLID CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	39000
6-1 (24-26 FT)	28800
6-1 (30-32 FT)	28600
6-2 (2-4 FT)	40400
6-2 (24-26 FT)	22500
6-2 (31-32 FT)	31300
6-3 (2-4 FT)	24100
6-3 (13-15 FT)	25700
6-9 (9-11 FT)	26800
6-9 (27-29 FT)	16100

PLANT SIX
SOLID CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	17.2
6-1 (24-26 FT)	17
6-1 (30-32 FT)	14.9
6-2 (2-4 FT)	20.6
6-2 (24-26 FT)	15
6-2 (31-32 FT)	20.1
6-3 (2-4 FT)	22.3
6-3 (13-15 FT)	30.2
6-9 (9-11 FT)	23.7
6-9 (27-29 FT)	23

PLANT SIX
SOLID CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	<5
6-1 (24-26 FT)	<5
6-1 (30-32 FT)	6
6-2 (2-4 FT)	6
6-2 (24-26 FT)	13
6-2 (31-32 FT)	15
6-3 (2-4 FT)	19
6-3 (13-15 FT)	25
6-9 (9-11 FT)	18
6-9 (27-29 FT)	28

PLANT SIX
SOLID CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	26.6
6-1 (24-26 FT)	58.5
6-1 (30-32 FT)	52.9
6-2 (2-4 FT)	54.2
6-2 (24-26 FT)	84.1
6-2 (31-32 FT)	98.7
6-3 (2-4 FT)	140
6-3 (13-15 FT)	146
6-9 (9-11 FT)	128
6-9 (27-29 FT)	193

PLANT SIX
SOLID CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	40.7
6-1 (24-26 FT)	53.2
6-1 (30-32 FT)	47.8
6-2 (2-4 FT)	57.2
6-2 (24-26 FT)	74
6-2 (31-32 FT)	120
6-3 (2-4 FT)	142
6-3 (13-15 FT)	161
6-9 (9-11 FT)	130
6-9 (27-29 FT)	203

PLANT SIX
SOLID CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	138000
6-1 (24-26 FT)	137000
6-1 (30-32 FT)	128000
6-2 (2-4 FT)	141000
6-2 (24-26 FT)	99400
6-2 (31-32 FT)	121000
6-3 (2-4 FT)	135000
6-3 (13-15 FT)	121000
6-9 (9-11 FT)	138000
6-9 (27-29 FT)	127000

PLANT SIX
SOLID CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	15800
6-1 (24-26 FT)	15400
6-1 (30-32 FT)	14400
6-2 (2-4 FT)	17000
6-2 (24-26 FT)	16000
6-2 (31-32 FT)	17600
6-3 (2-4 FT)	20800
6-3 (13-15 FT)	21800
6-9 (9-11 FT)	20000
6-9 (27-29 FT)	22000

PLANT SIX
SOLID CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	5630
6-1 (24-26 FT)	5670
6-1 (30-32 FT)	5280
6-2 (2-4 FT)	5770
6-2 (24-26 FT)	5670
6-2 (31-32 FT)	11400
6-3 (2-4 FT)	5460
6-3 (13-15 FT)	6360
6-9 (9-11 FT)	5570
6-9 (27-29 FT)	5710

PLANT SIX
SOLID CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	402
6-1 (24-26 FT)	282
6-1 (30-32 FT)	267
6-2 (2-4 FT)	324
6-2 (24-26 FT)	313
6-2 (31-32 FT)	263
6-3 (2-4 FT)	215
6-3 (13-15 FT)	356
6-9 (9-11 FT)	235
6-9 (27-29 FT)	186

PLANT SIX
SOLID CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	<30
6-1 (24-26 FT)	<30
6-1 (30-32 FT)	<30
6-2 (2-4 FT)	<30
6-2 (24-26 FT)	<30
6-2 (31-32 FT)	<30
6-3 (2-4 FT)	<30
6-3 (13-15 FT)	<30
6-9 (9-11 FT)	<30
6-9 (27-29 FT)	<30

PLANT SIX
SOLID CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	8000
6-1 (24-26 FT)	7700
6-1 (30-32 FT)	7400
6-2 (2-4 FT)	5700
6-2 (24-26 FT)	9700
6-2 (31-32 FT)	9600
6-3 (2-4 FT)	7800
6-3 (13-15 FT)	10300
6-9 (9-11 FT)	7500
6-9 (27-29 FT)	13800

PLANT SIX
SOLID CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	82
6-1 (24-26 FT)	123
6-1 (30-32 FT)	112
6-2 (2-4 FT)	105
6-2 (24-26 FT)	129
6-2 (31-32 FT)	174
6-3 (2-4 FT)	166
6-3 (13-15 FT)	212
6-9 (9-11 FT)	164
6-9 (27-29 FT)	251

PLANT SIX
SOLID CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	1100
6-1 (24-26 FT)	640
6-1 (30-32 FT)	600
6-2 (2-4 FT)	1020
6-2 (24-26 FT)	990
6-2 (31-32 FT)	1000
6-3 (2-4 FT)	1210
6-3 (13-15 FT)	1330
6-9 (9-11 FT)	1250
6-9 (27-29 FT)	1250

PLANT SIX
SOLID CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	<5
6-1 (24-26 FT)	<5
6-1 (30-32 FT)	<5
6-2 (2-4 FT)	45
6-2 (24-26 FT)	20
6-2 (31-32 FT)	35
6-3 (2-4 FT)	135
6-3 (13-15 FT)	160
6-9 (9-11 FT)	145
6-9 (27-29 FT)	80

PLANT SIX
SOLID CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	347
6-1 (24-26 FT)	267
6-1 (30-32 FT)	258
6-2 (2-4 FT)	217
6-2 (24-26 FT)	245
6-2 (31-32 FT)	302
6-3 (2-4 FT)	290
6-3 (13-15 FT)	326
6-9 (9-11 FT)	257
6-9 (27-29 FT)	363

PLANT SIX
SOLID CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 112381
WASTE SOLIDS	
6-1 (2-4 FT)	12
6-1 (24-26 FT)	16
6-1 (30-32 FT)	16
6-2 (2-4 FT)	18
6-2 (24-26 FT)	17
6-2 (31-32 FT)	19
6-3 (2-4 FT)	22
6-3 (13-15 FT)	25
6-9 (9-11 FT)	25
6-9 (27-29 FT)	26

PLANT SIX
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	4580
6-1 (24-26 FT)	4460
6-1 (30-32 FT)	4220
6-2 (2-4 FT)	5170
6-2 (24-26 FT)	4160
6-2 (31-32 FT)	5340
6-3 (2-4 FT)	6090
6-3 (13-15 FT)	6070
6-9 (9-11 FT)	5820
6-9 (27-29 FT)	6500

PLANT SIX
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	4580
6-1 (24-26 FT)	4460
6-1 (30-32 FT)	4220
6-2 (2-4 FT)	5170
6-2 (24-26 FT)	4160
6-2 (31-32 FT)	5340
6-3 (2-4 FT)	6090
6-3 (13-15 FT)	6070
6-9 (9-11 FT)	5820
6-9 (27-29 FT)	6500

PLANT SIX
SOLID CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	118
6-1 (24-26 FT)	161
6-1 (30-32 FT)	145
6-2 (2-4 FT)	148
6-2 (24-26 FT)	167
6-2 (31-32 FT)	225
6-3 (2-4 FT)	246
6-3 (13-15 FT)	270
6-9 (9-11 FT)	239
6-9 (27-29 FT)	346

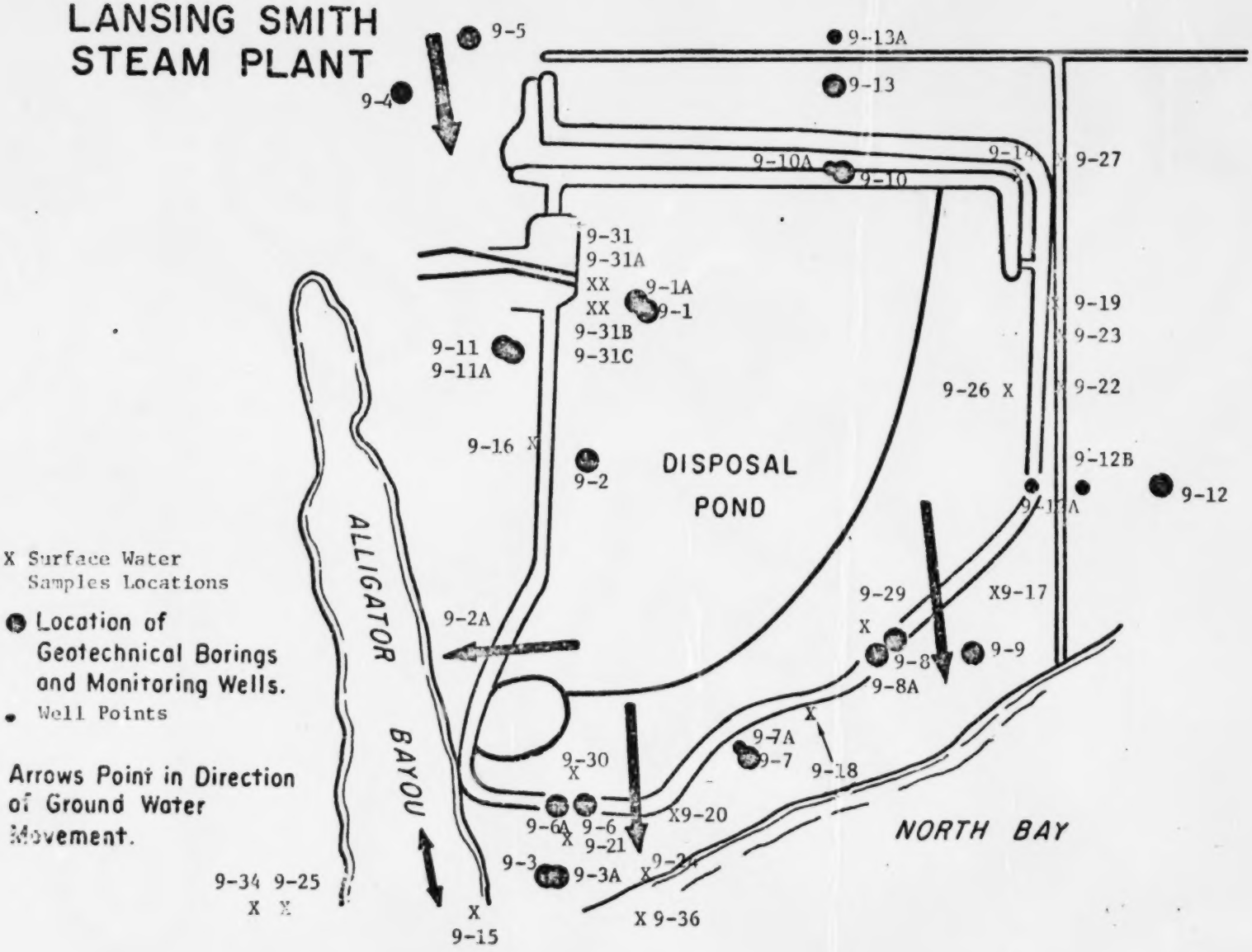
PLANT SIX
SOLID CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	124
6-1 (24-26 FT)	138
6-1 (30-32 FT)	121
6-2 (2-4 FT)	461
6-2 (24-26 FT)	399
6-2 (31-32 FT)	641
6-3 (2-4 FT)	1240
6-3 (13-15 FT)	1780
6-9 (9-11 FT)	1150
6-9 (27-29 FT)	1280

PLANT SIX
SOLID CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	112381
WASTE SOLIDS	
6-1 (2-4 FT)	156
6-1 (24-26 FT)	154
6-1 (30-32 FT)	149
6-2 (2-4 FT)	176
6-2 (24-26 FT)	142
6-2 (31-32 FT)	168
6-3 (2-4 FT)	177
6-3 (13-15 FT)	181
6-9 (9-11 FT)	185
6-9 (27-29 FT)	189

Smith


LANSING SMITH
STEAM PLANT
9-5
9-4
9-13A
9-13
9-10A
9-10
9-27
9-31
9-31A
XX
XX
9-1A
9-1
9-31B
9-31C
9-19
9-23
9-11
9-11A
9-26 X
9-22
9-16 X
9-2
DISPOSAL
POND
9-12B
9-12
9-12A
ALLIGATOR
BAYOU
X Surface Water
Samples Locations
Location of
Geotechnical Borings
and Monitoring Wells.
Well Points
Arrows Point in Direction
of Ground Water
Movement.
9-29
X9-17
X
9-8
9-9
9-8A
9-2A
9-7A
9-7
9-18
9-30
X
9-6A
9-6
9-21
X9-20
9-3
9-3A
NORTH BAY
9-34 9-25
X X
X
9-15
X 9-36

PLANT NINE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		747	861	1337
9-5		781	862	1340
9-13A		<764	<881	<1353
POND LIQUORS:				
9-1A (SCREEN IN ASH)		779	852	1382
9-1 (SCREEN AT INTERFACE)		776	851	1381
9-1 (6-8 FT)	1194			
9-2 (0-2 FT)	1196			
9-2 (4-6 FT)	1197			
9-14 (ASH OVERFLOW)		787	883	1354
9-30 (LIQUOR SOUTH)		802		1376
9-29 (LIQUOR SOUTHEAST)		801		1375
9-26 (LIQUOR EAST)		799		1372
WATERS UNDER POND:				
9-2		780	853	1336
9-1 (14-16 FT)	1195			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		773	886	1387
9-36 (OFF 9-24)		837	900	1378
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		782	864	<1342
9-6 (SOUTH, DEEP)		748	863	1341
9-2A (WEST)		<780	857	<1341
9-8A (SOUTH, SHALLOW)		754	870	1345
9-8 (SOUTH, DEEP)		752	869	1343
9-10A(NORTH, SHALLOW)		<759	873	<1345
9-10 (NORTH, DEEP)		759	872	1385
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		743	858	1383
9-3 (LOW TIDE)		744		
9-3A (SHALLOW, SOUTH)		745	860	1384
9-3A (LOW TIDE)		746		
9-7A (SHALLOW, SOUTH)		<751	<866	<1343
9-7 (DEEP, SOUTH)		751	866	1342
9-9 (SOUTH)		757	871	1346
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		800	896	1373
9-23 (MIX OF SEEP 9-19 AND 9-27)		793		1368
9-22 (SOUTH OF 9-23)		792	892	1367
SEEPS:				
9-19 (EAST)		768	891	1364
9-17 (SOUTHEAST)		765	890	1356
9-16 (WEST)		789	888	

(< refers to a negative sample number)

PLANT NINE

Sample Numbers

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		761	878	1351
9-11 (DEEP,WEST)		760	876	1350
9-12A (SOUTHEAST)		<786	<879	<1352
9-12B (SOUTHEAST)		<761	880	<1351
9-12 (SOUTHEAST)		786	879	1352
9-13 (NORTH)		764	881	1353
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		766		1359
9-20 (SOUTH)		790		1365
9-21 (SOUTH)		769		1366
9-24 (SOUTH)		797	895	1370
9-34 (OTHER SIDE OF BAYOU)		805	<900	1377
9-34 (DISSOLVED SOLIDS)				1395
9-25 (OTHER SIDE OF BAYOU)		798		1371
ASH INFLUENTS				
9-31		803		
9-31A (CLEAR)			897	1393
9-31A (GREY)			898	1388
9-31B			899	
9-31B (BLACK)				1389
9-31B (DARK)				1394
9-31C				1390

PLANT NINE
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<1	<1	2
9-5		<0.1	<1	0.2
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<20	<25	41
9-1 (SCREEN AT INTERFACE)		<5	<13	<25
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)		<10	<13	<0.5
9-30 (LIQUOR SOUTH)		<20		8
9-29 (LIQUOR SOUTHEAST)		<10		<5
9-26 (LIQUOR EAST)		<25		10
WATERS UNDER POND:				
9-2		<50	<50	9
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<50	<50	49
9-36 (OFF 9-24)			<50	79
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<13	<25	
9-6 (SOUTH, DEEP)		<10	<25	11
9-2A (WEST)			<13	
9-8A (SOUTH, SHALLOW)		<10	<20	8
9-8 (SOUTH, DEEP)		<10	<20	16
9-10A(NORTH, SHALLOW)			<10	
9-10 (NORTH, DEEP)		<10	<10	18
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<2.5	<5	17
9-3 (LOW TIDE)		<2.5		
9-3A (SHALLOW, SOUTH)		<20	<25	54
9-3A (LOW TIDE)		<20		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		13	<13	22
9-9 (SOUTH)		<20	<25	51
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.1	<1	2
9-23 (MIX OF SEEP 9-19 AND 9-27)		<5		8
9-22 (SOUTH OF 9-23)		<1	<13	8
SEEPS:				
9-19 (EAST)		<10	<13	8
9-17 (SOUTHEAST)		<10	<13	8
9-16 (WEST)		<13	<25	

PLANT NINE
CONCENTRATION OF 1 FLUORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<20	<20	60
9-11 (DEEP,WEST)		<1	<1	2
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)			<13	
9-12 (SOUTHEAST)		<1	<1	2
9-13 (NORTH)		<1	<1	2
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<13		17
9-20 (SOUTH)		<10		16
9-21 (SOUTH)		<10		8
9-24 (SOUTH)		<10	<25	26
9-34 (OTHER SIDE OF BAYOU)		<5		5
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)		<20		<25
ASH INFLUENTS				
9-31		<50		
9-31A (CLEAR)			<13	173
9-31A (GREY)			<13	210
9-31B			<13	
9-31B (BLACK)				2
9-31B (DARK)				87
9-31C				2

PLANT NINE
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4				
9-5		24	28	21
9-13A		11	21	11
POND LIQUORS:				
9-1A (SCREEN IN ASH)				
9-1 (SCREEN AT INTERFACE)		4800	4485	4313
9-1 (6-8 FT)		1720	2900	3865
9-2 (0-2 FT)	2883			
9-2 (4-6 FT)	15250			
9-14 (ASH OVERFLOW)	4725			
9-30 (LIQUOR SOUTH)		1720	2270	792
9-29 (LIQUOR SOUTHEAST)		3470		773
9-26 (LIQUOR EAST)		7690		762
		5040		756
WATERS UNDER POND:				
9-2				
9-1 (14-16 FT)	980	8500	12240	7475
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)				
9-36 (OFF 9-24)		14440	9330	3570
			8365	6850
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		2590	3425	
9-6 (SOUTH, DEEP)		1550	2770	644
9-2A (WEST)			2433	
9-8A (SOUTH, SHALLOW)		1690	2786	742
9-8 (SOUTH, DEEP)		2040	2832	980
9-10A(NORTH, SHALLOW)			137	
9-10 (NORTH, DEEP)		1250	196	1199
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		530	1043	1762
9-3 (LOW TIDE)		520		
9-3A (SHALLOW, SOUTH)		4400	4368	4130
9-3A (LOW TIDE)		4400		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		3250	2642	2696
9-9 (SOUTH)		5600	4580	4075
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		8	9	15
9-23 (MIX OF SEEP 9-19 AND 9-27)		752		798
9-22 (SOUTH OF 9-23)		225	2517	786
SEEPS:				
9-19 (EAST)		1570	2860	726
9-17 (SOUTHEAST)		1400	3101	673
9-16 (WEST)		2950	7000	

PLANT NINE
CONCENTRATION OF 2 CHLORIDE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		1910	1662	1064
9-11 (DEEP,WEST)		37	23	26
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)			3043	
9-12 (SOUTHEAST)		21	20	16
9-13 (NORTH)		71	116	212
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		2440		1333
9-20 (SOUTH)		2630		1380
9-21 (SOUTH)		1600		377
9-24 (SOUTH)		2250	3015	2109
9-34 (OTHER SIDE OF BAYOU)		585		355
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)		2970		730
ASH INFLUENTS				
9-31		14700		
9-31A (CLEAR)			2276	11860
9-31A (GREY)			1835	11620
9-31B			1280	
9-31B (BLACK)				16530
9-31B (DARK)				8015
9-31C				197

PLANT NINE
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		17	8	<5
9-5		2	8	<0.5
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		1120	730	609
9-1 (SCREEN AT INTERFACE)		895	1049	1218
9-1 (6-8 FT)	635			
9-2 (0-2 FT)	1416			
9-2 (4-6 FT)	1596			
9-14 (ASH OVERFLOW)		831	822	503
9-30 (LIQUOR SOUTH)		650		538
9-29 (LIQUOR SOUTHEAST)		746		542
9-26 (LIQUOR EAST)		1164		529
WATERS UNDER POND:				
9-2		2450	1736	779
9-1 (14-16 FT)	1596			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		2471	1925	707
9-36 (OFF 9-24)			1360	1163
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		2570	3195	
9-6 (SOUTH,DEEP)		708	1075	503
9-2A (WEST)			1338	
9-8A (SOUTH,SHALLOW)		833	856	552
9-8 (SOUTH,DEEP)		776	1057	418
9-10A(NORTH,SHALLOW)			854	
9-10 (NORTH,DEEP)		904	922	871
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		58	98	244
9-3 (LOW TIDE)		58		
9-3A (SHALLOW,SOUTH)		228	2100	1768
9-3A (LOW TIDE)		228		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		545	500	303
9-9 (SOUTH)		1670	1568	1290
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		28	46	115
9-23 (MIX OF SEEP 9-19 AND 9-27)		326		421
9-22 (SOUTH OF 9-23)		121	860	376
SEEPS:				
9-19 (EAST)		699	950	466
9-17 (SOUTHEAST)		1080	950	503
9-16 (WEST)		1800	2853	

PLANT NINE
CONCENTRATION OF 4 SULFATE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		5930	6594	5933
9-11 (DEEP,WEST)		32	11	10
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)			972	
9-12 (SOUTHEAST)		35	17	<0.5
9-13 (NORTH)		25	12	0.7
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		1130		712
9-20 (SOUTH)		1865		1650
9-21 (SOUTH)		767		376
9-24 (SOUTH)		746	1175	993
9-34 (OTHER SIDE OF BAYOU)		314		40
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)		699		318
ASH INFLUENTS				
9-31		1720		
9-31A (CLEAR)			813	2436
9-31A (GREY)			973	2750
9-31B			500	
9-31B (BLACK)				2720
9-31B (DARK)				1414
9-31C				95

PLANT NINE
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<0.005	<0.005	<0.005
9-5		<0.01	<0.005	<0.005
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.005	<0.005	0.007
9-1 (SCREEN AT INTERFACE)		<0.01	<0.005	0.006
9-1 (6-8 FT)	<0.005			
9-2 (0-2 FT)	<0.005			
9-2 (4-6 FT)	<0.005			
9-14 (ASH OVERFLOW)		<0.005	<0.005	<0.005
9-30 (LIQUOR SOUTH)		<0.005		<0.005
9-29 (LIQUOR SOUTHEAST)		<0.005		<0.005
9-26 (LIQUOR EAST)		<0.005		<0.005
WATERS UNDER POND:				
9-2		<0.005	<0.005	0.007
9-1 (14-16 FT)	<0.005			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.005	<0.005	<0.005
9-36 (OFF 9-24)			<0.005	0.007
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<0.005	<0.005	
9-6 (SOUTH, DEEP)		<0.005	<0.005	<0.005
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<0.005	<0.005	<0.005
9-8 (SOUTH, DEEP)		<0.005	<0.005	<0.005
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.005	<0.005	<0.005
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.005	<0.005	0.006
9-3 (LOW TIDE)		<0.005		
9-3A (SHALLOW, SOUTH)		<0.005	<0.005	0.016
9-3A (LOW TIDE)		<0.005		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		<0.005	<0.005	<0.005
9-9 (SOUTH)		<0.005	<0.005	<0.005
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.005	0.006	0.007
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.005		<0.005
9-22 (SOUTH OF 9-23)		<0.005	<0.005	<0.005
SEEPS:				
9-19 (EAST)		<0.005	<0.005	<0.005
9-17 (SOUTHEAST)		<0.005	<0.005	<0.005
9-16 (WEST)		<0.005	<0.005	

PLANT NINE
CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.005	<0.005	<0.005
9-11 (DEEP,WEST)		<0.005	<0.005	<0.005
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.01	<0.005	<0.005
9-13 (NORTH)		<0.005	<0.005	<0.005
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.005		<0.005
9-20 (SOUTH)		<0.005		<0.005
9-21 (SOUTH)		<0.005		0.006
9-24 (SOUTH)		<0.005	<0.005	<0.005
9-34 (OTHER SIDE OF BAYOU)		<0.005		<0.005
9-34 (DISSOLVED SOLIDS)				0.017
9-25 (OTHER SIDE OF BAYOU)		<0.005		<0.005
ASH INFLUENTS				
9-31		<0.005		
9-31A (CLEAR)			<0.005	0.015
9-31A (GREY)			<0.005	0.015
9-31B			<0.005	
9-31B (BLACK)				0.02
9-31B (DARK)				0.018
9-31C				0.014

PLANT NINE
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.01	<0.3	<0.3
9-5		<0.3	<0.3	<0.3
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		2.34	3.8	5.56
9-1 (SCREEN AT INTERFACE)		0.34	<0.01	1.35
9-1 (6-8 FT)	3.26			
9-2 (0-2 FT)	3.68			
9-2 (4-6 FT)	1.31			
9-14 (ASH OVERFLOW)		0.24	0.32	1.1
9-30 (LIQUOR SOUTH)		0.07		1.25
9-29 (LIQUOR SOUTHEAST)		0.22		1.35
9-26 (LIQUOR EAST)		0.35		1.22
WATERS UNDER POND:				
9-2		1.03	<0.01	1.52
9-1 (14-16 FT)	0.89			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.01	<0.01	<0.3
9-36 (OFF 9-24)			<0.01	0.19
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		62.2	82.7	
9-6 (SOUTH, DEEP)		0.04	0.43	0.3
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<0.01	0.4	0.29
9-8 (SOUTH, DEEP)		<0.01	0.22	0.21
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.01	0.33	0.78
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.01	<0.01	0.36
9-3 (LOW TIDE)		<0.3		
9-3A (SHALLOW, SOUTH)		5.8	7.56	6.23
9-3A (LOW TIDE)		5.34		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		43.3	40.9	33
9-9 (SOUTH)		0.72	1.48	1.54
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		1.1	1.49	3.02
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.48		0.25
9-22 (SOUTH OF 9-23)		1.46	0.28	0.27
SEEPS:				
9-19 (EAST)		<0.01	0.09	0.29
9-17 (SOUTHEAST)		<0.01	0.16	0.2
9-16 (WEST)		0.69	0.76	

PLANT NINE
CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		33.9	40.5	39.1
9-11 (DEEP,WEST)		<0.01	<0.01	<0.3
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.3	<0.3	<0.3
9-13 (NORTH)		<0.3	<0.3	<0.3
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.01		0.35
9-20 (SOUTH)		8.56		8.61
9-21 (SOUTH)		<0.01		0.31
9-24 (SOUTH)		0.26	0.53	0.57
9-34 (OTHER SIDE OF BAYOU)		25.5		0.68
9-34 (DISSOLVED SOLIDS)				0.45
9-25 (OTHER SIDE OF BAYOU)		1.65		<0.3
ASH INFLUENTS				
9-31		0.01		
9-31A (CLEAR)			1.32	0.53
9-31A (GREY)			0.52	0.75
9-31B			0.5	
9-31B (BLACK)				0.91
9-31B (DARK)				0.51
9-31C				0.4

PLANT NINE
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		0.064	0.115	0.018
9-5		<0.004	0.042	0.013
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		1.29	1.08	1.58
9-1 (SCREEN AT INTERFACE)		8.11	6.73	6.57
9-1 (6-8 FT)	1.58			
9-2 (0-2 FT)	2.48			
9-2 (4-6 FT)	3.56			
9-14 (ASH OVERFLOW)		1.79	2.2	2.95
9-30 (LIQUOR SOUTH)		2.12		2.96
9-29 (LIQUOR SOUTHEAST)		2.65		3.15
9-26 (LIQUOR EAST)		2.28		2.87
WATERS UNDER POND:				
9-2		1.7	2.49	5.49
9-1 (14-16 FT)	8			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		2.83	1.76	0.909
9-36 (OFF 9-24)			1.64	1.41
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		3.43	2.87	
9-6 (SOUTH, DEEP)		2.19	2.31	2.92
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		2.13	2.3	2.76
9-8 (SOUTH, DEEP)		2.32	1.98	2.96
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		2.69	2.37	2.67
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		0.069	0.029	0.089
9-3 (LOW TIDE)		0.066		
9-3A (SHALLOW, SOUTH)		8.29	7.45	6.71
9-3A (LOW TIDE)		8.47		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		0.511	0.338	0.378
9-9 (SOUTH)		3.5	3.15	3.72
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.043	2.65	0.108
9-23 (MIX OF SEEP 9-19 AND 9-27)		1.11		2.58
9-22 (SOUTH OF 9-23)		0.38	1.97	1.86
SEEPS:				
9-19 (EAST)		1.84	2.36	2.5
9-17 (SOUTHEAST)		2.85	2.22	3.09
9-16 (WEST)		4.37	5.52	

PLANT NINE
CONCENTRATION OF 9 BORON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		7.3	1.7	1.04
9-11 (DEEP,WEST)		0.061	<0.02	<0.004
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.004	<0.02	0.022
9-13 (NORTH)		0.019	<0.02	<0.004
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		3.2		4.22
9-20 (SOUTH)		3.84		4.61
9-21 (SOUTH)		2.74		3.83
9-24 (SOUTH)		2.69	<0.02	3.89
9-34 (OTHER SIDE OF BAYOU)		0.204		0.13
9-34 (DISSOLVED SOLIDS)				0.111
9-25 (OTHER SIDE OF BAYOU)		0.706		0.649
ASH INFLUENTS				
9-31		7.23		
9-31A (CLEAR)			2.16	2.5
9-31A (GREY)			5.57	4.07
9-31B			2.24	
9-31B (BLACK)				0.858
9-31B (DARK)				1.68
9-31C				0.373

PLANT NINE
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		0.012	<0.005	0.009
9-5		0.014	0.012	0.022
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		0.254	0.374	0.542
9-1 (SCREEN AT INTERFACE)		0.125	0.111	0.082
9-1 (6-8 FT)	0.216			
9-2 (0-2 FT)	0.414			
9-2 (4-6 FT)	0.044			
9-14 (ASH OVERFLOW)		0.194	0.171	0.357
9-30 (LIQUOR SOUTH)		0.266		0.335
9-29 (LIQUOR SOUTHEAST)		0.167		0.381
9-26 (LIQUOR EAST)		0.217		0.36
WATERS UNDER POND:				
9-2		<0.005	<0.005	<0.005
9-1 (14-16 FT)	0.048			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.005	<0.005	<0.005
9-36 (OFF 9-24)			<0.005	<0.005
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<0.005	<0.005	
9-6 (SOUTH, DEEP)		<0.005	0.016	0.02
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<0.005	<0.005	0.037
9-8 (SOUTH, DEEP)		0.021	0.015	0.042
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		0.04	0.05	0.051
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		0.055	0.232	0.308
9-3 (LOW TIDE)		0.054		
9-3A (SHALLOW, SOUTH)		<0.005	<0.005	<0.005
9-3A (LOW TIDE)		<0.005		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		0.094	0.098	0.1
9-9 (SOUTH)		0.011	0.016	0.041
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.03	0.017	0.036
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.043		0.084
9-22 (SOUTH OF 9-23)		0.036	0.171	0.061
SEEPS:				
9-19 (EAST)		0.041	0.05	0.073
9-17 (SOUTHEAST)		0.044	0.082	0.051
9-16 (WEST)		0.008	0.05	

PLANT NINE
CONCENTRATION OF 10 BARIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.005	<0.005	<0.005
9-11 (DEEP,WEST)		<0.005	<0.005	<0.005
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)				
9-13 (NORTH)		0.04	0.021	0.017
		0.066	0.108	0.238
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		0.04		
9-20 (SOUTH)		<0.005		0.058
9-21 (SOUTH)		0.043		<0.005
9-24 (SOUTH)		<0.005		0.054
9-34 (OTHER SIDE OF BAYOU)		0.028	0.185	0.037
9-34 (DISSOLVED SOLIDS)				0.02
9-25 (OTHER SIDE OF BAYOU)		0.015		0.026
				0.015
ASH INFLUENTS				
9-31		0.116		
9-31A (CLEAR)			0.04	<0.005
9-31A (GREY)			0.121	0.319
9-31B			0.118	
9-31B (BLACK)				0.315
9-31B (DARK)				0.185
9-31C				0.188

PLANT NINE
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<0.0005	<0.0005	<0.0005
9-5		<0.0005	0.0009	<0.0005
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.0005	<0.0005	<0.0005
9-1 (SCREEN AT INTERFACE)		<0.0005	<0.0005	<0.0005
9-1 (6-8 FT)	<0.0005			
9-2 (0-2 FT)	<0.0005			
9-2 (4-6 FT)	<0.0005			
9-14 (ASH OVERFLOW)		<0.0005	<0.0005	<0.0005
9-30 (LIQUOR SOUTH)		<0.0005		<0.0005
9-29 (LIQUOR SOUTHEAST)		<0.0005		<0.0005
9-26 (LIQUOR EAST)		<0.0005		<0.0005
WATERS UNDER POND:				
9-2		<0.0005	<0.0005	<0.0005
9-1 (14-16 FT)	<0.0005			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		0.0006	<0.0005	<0.0005
9-36 (OFF 9-24)			<0.0005	<0.0005
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		0.0028	0.0052	
9-6 (SOUTH, DEEP)		<0.0005	<0.0005	<0.0005
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<0.0005	<0.0005	<0.0005
9-8 (SOUTH, DEEP)		<0.0005	<0.0005	<0.0005
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.0005	<0.0005	<0.0005
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.0005	<0.0005	<0.0005
9-3 (LOW TIDE)		<0.0005		
9-3A (SHALLOW, SOUTH)		<0.0005	<0.0005	<0.0005
9-3A (LOW TIDE)		<0.0005		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		0.0084	0.0074	0.0062
9-9 (SOUTH)		<0.0005	<0.0005	<0.0005
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.0005	<0.0005	<0.0005
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.0005		<0.0005
9-22 (SOUTH OF 9-23)		<0.0005	<0.0005	<0.0005
SEEPS:				
9-19 (EAST)		<0.0005	<0.0005	<0.0005
9-17 (SOUTHEAST)		<0.0005	<0.0005	<0.0005
9-16 (WEST)		<0.0005	<0.0005	

PLANT NINE
CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.0005	<0.0005	<0.0005
9-11 (DEEP,WEST)		<0.0005	<0.0005	<0.0005
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.0005	<0.0005	<0.0005
9-13 (NORTH)		<0.0005	0.0006	<0.0005
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.0005		<0.0005
9-20 (SOUTH)		<0.0005		<0.0005
9-21 (SOUTH)		<0.0005		<0.0005
9-24 (SOUTH)		<0.0005	<0.0005	<0.0005
9-34 (OTHER SIDE OF BAYOU)		0.0023		<0.0005
9-34 (DISSOLVED SOLIDS)				<0.0005
9-25 (OTHER SIDE OF BAYOU)		0.0011		<0.0005
ASH INFLUENTS				
9-31		<0.0005		
9-31A (CLEAR)			<0.0005	<0.0005
9-31A (GREY)			<0.0005	<0.0005
9-31B			<0.0005	
9-31B (BLACK)				<0.0005
9-31B (DARK)				<0.0005
9-31C				<0.0005

PLANT NINE
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		100	83.7	88.2
9-5		9.54	6.99	6.86
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		649	528	498
9-1 (SCREEN AT INTERFACE)		779	910	865
9-1 (6-8 FT)	582			
9-2 (0-2 FT)	1710			
9-2 (4-6 FT)	1090			
9-14 (ASH OVERFLOW)		303	360	266
9-30 (LIQUOR SOUTH)		342		252
9-29 (LIQUOR SOUTHEAST)		361		282
9-26 (LIQUOR EAST)		358		254
WATERS UNDER POND:				
9-2		1270	1830	1210
9-1 (14-16 FT)	723			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		252	195	92.6
9-36 (OFF 9-24)			205	130
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		453	510	
9-6 (SOUTH,DEEP)		303	301	209
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		341	303	221
9-8 (SOUTH,DEEP)		380	327	180
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		494	501	420
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		106	120	147
9-3 (LOW TIDE)		97		
9-3A (SHALLOW,SOUTH)		496	533	479
9-3A (LOW TIDE)		527		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		129	119	90.6
9-9 (SOUTH)		490	398	349
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		7.56	8.21	18.5
9-23 (MIX OF SEEP 9-19 AND 9-27)		162		169
9-22 (SOUTH OF 9-23)		56.8	366	140
SEEPS:				
9-19 (EAST)		270	279	196
9-17 (SOUTHEAST)		328	313	194
9-16 (WEST)		831	931	

PLANT NINE
CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		630	551	507
9-11 (DEEP,WEST)		128	101	93.9
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		86.2	59.5	76.5
9-13 (NORTH)		73.6	81.2	84.4
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		406		221
9-20 (SOUTH)		543		397
9-21 (SOUTH)		301		209
9-24 (SOUTH)		357	355	299
9-34 (OTHER SIDE OF BAYOU)		55.9		7.81
9-34 (DISSOLVED SOLIDS)				4.9
9-25 (OTHER SIDE OF BAYOU)		86.5		63.9
ASH INFLUENTS				
9-31		656		
9-31A (CLEAR)			576	240
9-31A (GREY)			364	378
9-31B			394	
9-31B (BLACK)				484
9-31B (DARK)				205
9-31C				110

PLANT NINE
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		0.02	<0.01	<0.01
9-5		0.02	<0.01	<0.01
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		0.03	0.01	0.02
9-1 (SCREEN AT INTERFACE)		0.03	0.02	0.02
9-1 (6-8 FT)	0.03			
9-2 (0-2 FT)	0.06			
9-2 (4-6 FT)	0.05			
9-14 (ASH OVERFLOW)		0.02	0.03	<0.01
9-30 (LIQUOR SOUTH)		0.03		0.01
9-29 (LIQUOR SOUTHEAST)		0.04		<0.01
9-26 (LIQUOR EAST)		0.06		0.01
WATERS UNDER POND:				
9-2		0.04	0.03	0.03
9-1 (14-16 FT)	0.03			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		0.04	0.04	0.01
9-36 (OFF 9-24)			0.04	0.02
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		0.09	0.02	
9-6 (SOUTH, DEEP)		0.03	<0.01	0.01
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		0.03	0.04	<0.01
9-8 (SOUTH, DEEP)		0.03	0.04	0.01
9-10A (NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		0.04	0.04	0.01
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		0.02	<0.01	0.01
9-3 (LOW TIDE)		0.02		
9-3A (SHALLOW, SOUTH)		0.04	<0.01	0.02
9-3A (LOW TIDE)		0.04		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		0.04	<0.01	<0.01
9-9 (SOUTH)		0.04	0.05	0.02
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.02	<0.01	<0.01
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.03		<0.01
9-22 (SOUTH OF 9-23)		0.03	0.04	<0.01
SEEPS:				
9-19 (EAST)		0.01	0.04	<0.01
9-17 (SOUTHEAST)		0.02	0.04	<0.01
9-16 (WEST)		0.04	0.05	

PLANT NINE
CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.14	0.02	<0.01
9-11 (DEEP,WEST)		0.03	0.02	<0.01
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		0.02	<0.01	<0.01
9-13 (NORTH)		<0.01	<0.01	<0.01
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		0.03		<0.01
9-20 (SOUTH)		0.05		0.01
9-21 (SOUTH)		0.02		0.01
9-24 (SOUTH)		0.04	0.03	0.01
9-34 (OTHER SIDE OF BAYOU)		0.02		<0.01
9-34 (DISSOLVED SOLIDS)				<0.01
9-25 (OTHER SIDE OF BAYOU)		0.04		<0.01
ASH INFLUENTS				
9-31		0.05		
9-31A (CLEAR)			0.05	0.02
9-31A (GREY)			0.04	0.03
9-31B			0.04	
9-31B (BLACK)				0.02
9-31B (DARK)				0.02
9-31C				<0.01

PLANT NINE
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.7	<0.05	<0.05
9-5		<0.7	<0.05	<0.05
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.7	<0.05	0.07
9-1 (SCREEN AT INTERFACE)		<0.7	<0.05	<0.05
9-1 (6-8 FT)	0.1			
9-2 (0-2 FT)	<0.05			
9-2 (4-6 FT)	<0.05			
9-14 (ASH OVERFLOW)		<0.7	<0.05	<0.05
9-30 (LIQUOR SOUTH)		<0.7		0.06
9-29 (LIQUOR SOUTHEAST)		<0.7		<0.05
9-26 (LIQUOR EAST)		<0.7		0.1
WATERS UNDER POND:				
9-2		<0.7	<0.05	<0.05
9-1 (14-16 FT)	<0.05			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.7	<0.05	0.08
9-36 (OFF 9-24)			0.08	0.06
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		<0.7	<0.05	
9-6 (SOUTH,DEEP)		<0.7	<0.05	<0.05
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		<0.7	<0.05	<0.05
9-8 (SOUTH,DEEP)		<0.7	<0.05	<0.05
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		<0.7	<0.05	<0.05
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		<0.7	<0.05	<0.05
9-3 (LOW TIDE)		<0.7		
9-3A (SHALLOW,SOUTH)		<0.7	<0.05	0.13
9-3A (LOW TIDE)		<0.7		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		<0.7	<0.05	<0.05
9-9 (SOUTH)		<0.7	<0.05	<0.05
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.7	<0.05	0.14
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.7		<0.05
9-22 (SOUTH OF 9-23)		<0.7	<0.05	<0.05
SEEPS:				
9-19 (EAST)		<0.7	<0.05	<0.05
9-17 (SOUTHEAST)		<0.7	<0.05	<0.05
9-16 (WEST)		<0.7	<0.05	

PLANT NINE
CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.7	<0.05	<0.05
9-11 (DEEP,WEST)		<0.7	<0.05	<0.05
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.7	<0.05	<0.05
9-13 (NORTH)		<0.7	<0.05	<0.05
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.7		<0.05
9-20 (SOUTH)		<0.7		<0.05
9-21 (SOUTH)		<0.7		0.07
9-24 (SOUTH)		<0.7	<0.05	<0.05
9-34 (OTHER SIDE OF BAYOU)		<0.7		<0.05
9-34 (DISSOLVED SOLIDS)				0.18
9-25 (OTHER SIDE OF BAYOU)		<0.7		0.07
ASH INFLUENTS				
9-31		<0.7		
9-31A (CLEAR)			<0.05	0.17
9-31A (GREY)			<0.05	0.18
9-31B			0.08	
9-31B (BLACK)				0.18
9-31B (DARK)				0.15
9-31C				0.2

PLANT NINE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<0.05	<0.05	<0.01
9-5		<0.05	<0.05	<0.01
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.05	<0.05	0.02
9-1 (SCREEN AT INTERFACE)		<0.05	<0.05	<0.01
9-1 (6-8 FT)	0.03			
9-2 (0-2 FT)	1.07			
9-2 (4-6 FT)	0.04			
9-14 (ASH OVERFLOW)		<0.05	<0.05	0.03
9-30 (LIQUOR SOUTH)		<0.05		0.02
9-29 (LIQUOR SOUTHEAST)		<0.05		0.03
9-26 (LIQUOR EAST)		<0.05		0.03
WATERS UNDER POND:				
9-2		0.1	<0.05	<0.01
9-1 (14-16 FT)	0.03			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.05	<0.05	0.04
9-36 (OFF 9-24)			<0.05	0.06
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<0.05	<0.05	
9-6 (SOUTH, DEEP)		<0.05	<0.05	0.02
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<0.05	<0.05	0.01
9-8 (SOUTH, DEEP)		0.12	<0.05	<0.01
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.05	<0.05	<0.01
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.05	<0.05	0.03
9-3 (LOW TIDE)		<0.05		
9-3A (SHALLOW, SOUTH)		<0.05	<0.05	0.04
9-3A (LOW TIDE)		<0.05		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		0.2	<0.05	0.04
9-9 (SOUTH)		<0.05	<0.05	0.04
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.05	<0.05	<0.01
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.05		<0.01
9-22 (SOUTH OF 9-23)		<0.05	<0.05	<0.01
SEEPS:				
9-19 (EAST)		<0.05	<0.05	<0.01
9-17 (SOUTHEAST)		<0.05	<0.05	0.01
9-16 (WEST)		<0.05	<0.05	

PLANT NINE
CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.05	<0.05	0.08
9-11 (DEEP,WEST)		<0.05	<0.05	<0.01
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.05	<0.05	<0.01
9-13 (NORTH)		<0.05	<0.05	<0.01
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.05		<0.01
9-20 (SOUTH)		<0.05		0.02
9-21 (SOUTH)		<0.05		<0.01
9-24 (SOUTH)		<0.05	<0.05	0.02
9-34 (OTHER SIDE OF BAYOU)		<0.05		0.03
9-34 (DISSOLVED SOLIDS)				0.02
9-25 (OTHER SIDE OF BAYOU)		<0.05		0.04
ASH INFLUENTS				
9-31		<0.05		
9-31A (CLEAR)			<0.05	0.1
9-31A (GREY)			<0.05	0.13
9-31B			<0.05	
9-31B (BLACK)				0.05
9-31B (DARK)				0.08
9-31C				0.02

PLANT NINE
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<0.008	<0.008	<0.008
9-5		0.023	<0.008	<0.008
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.008	0.009	0.013
9-1 (SCREEN AT INTERFACE)		<0.008	<0.008	0.012
9-1 (6-8 FT)	0.039			
9-2 (0-2 FT)	0.124			
9-2 (4-6 FT)	0.747			
9-14 (ASH OVERFLOW)		<0.008	<0.008	<0.008
9-30 (LIQUOR SOUTH)		<0.008		0.01
9-29 (LIQUOR SOUTHEAST)		<0.008		0.008
9-26 (LIQUOR EAST)		0.031		0.014
WATERS UNDER POND:				
9-2		<0.008	0.014	0.01
9-1 (14-16 FT)	0.196			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.008	<0.008	0.009
9-36 (OFF 9-24)			0.009	0.013
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		0.176	0.057	
9-6 (SOUTH, DEEP)		<0.008	<0.008	<0.008
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<0.008	<0.008	<0.008
9-8 (SOUTH, DEEP)		<0.008	<0.008	<0.008
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.008	<0.008	0.008
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.008	0.01	0.01
9-3 (LOW TIDE)		<0.008		
9-3A (SHALLOW, SOUTH)		<0.008	<0.008	0.02
9-3A (LOW TIDE)		<0.008		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		<0.008	<0.008	<0.008
9-9 (SOUTH)		<0.008	<0.008	<0.008
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.01	<0.008	0.016
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.021		<0.008
9-22 (SOUTH OF 9-23)		0.039	<0.008	<0.008
SEEPS:				
9-19 (EAST)		<0.008	<0.008	0.01
9-17 (SOUTHEAST)		<0.008	<0.008	<0.008
9-16 (WEST)		0.013	0.008	

PLANT NINE
CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.075	0.054	0.068
9-11 (DEEP,WEST)		<0.008	<0.008	<0.008
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		0.031	<0.008	<0.008
9-13 (NORTH)		<0.008	<0.008	<0.008
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.008		<0.008
9-20 (SOUTH)		0.031		0.014
9-21 (SOUTH)		<0.008		0.01
9-24 (SOUTH)		0.023	<0.008	0.009
9-34 (OTHER SIDE OF BAYOU)		0.013		0.036
9-34 (DISSOLVED SOLIDS)				0.039
9-25 (OTHER SIDE OF BAYOU)		0.025		0.009
ASH INFLUENTS				
9-31		<0.008		
9-31A (CLEAR)			<0.008	0.025
9-31A (GREY)			<0.008	0.026
9-31B			0.009	
9-31B (BLACK)				0.026
9-31B (DARK)				0.019
9-31C				0.022

Note: Data for the third sampling trip (9/23/82) should be interpreted with caution since two out of four blanks for this trip read 0.011 and 0.021 ppm.

PLANT NINE
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		9.77	11	9.62
9-5		2.27	2.82	2.84
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.2	0.13	0.08
9-1 (SCREEN AT INTERFACE)		<0.2	0.26	0.2
9-1 (6-8 FT)	0.06			
9-2 (0-2 FT)	0.14			
9-2 (4-6 FT)	0.16			
9-14 (ASH OVERFLOW)		<0.2	0.1	0.1
9-30 (LIQUOR SOUTH)		<0.2		0.05
9-29 (LIQUOR SOUTHEAST)		<0.2		0.05
9-26 (LIQUOR EAST)		<0.2		0.05
WATERS UNDER POND:				
9-2		<0.2	0.21	0.13
9-1 (14-16 FT)	0.19			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.2	0.23	0.17
9-36 (OFF 9-24)			0.27	0.14
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		581	417	
9-6 (SOUTH, DEEP)		5.97	8.95	4.44
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		13.2	16.9	17.4
9-8 (SOUTH, DEEP)		6.58	7.93	5.83
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.2	0.17	0.14
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		12.8	33	54.7
9-3 (LOW TIDE)		13.5		
9-3A (SHALLOW, SOUTH)		14.7	15.2	13
9-3A (LOW TIDE)		14.9		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		33.3	35.5	24.4
9-9 (SOUTH)		9.6	7.59	6.32
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.5	1.17	10.3
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.2		1.41
9-22 (SOUTH OF 9-23)		0.43	0.23	2.52
SEEPS:				
9-19 (EAST)		0.22	0.23	0.54
9-17 (SOUTHEAST)		0.55	0.54	0.06
9-16 (WEST)		<0.2	0.23	

PLANT NINE
CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		1900	2100	2330
9-11 (DEEP,WEST)		11.6	8.2	11.3
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		0.5	0.33	1.36
9-13 (NORTH)		9.26	15.6	19.5
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		0.47		0.89
9-20 (SOUTH)		98.6		56.1
9-21 (SOUTH)		6.56		2.39
9-24 (SOUTH)		<0.2	0.1	19.6
9-34 (OTHER SIDE OF BAYOU)		0.97		111
9-34 (DISSOLVED SOLIDS)				99.9
9-25 (OTHER SIDE OF BAYOU)		0.43		0.16
ASH INFLUENTS				
9-31		<0.2		
9-31A (CLEAR)			0.23	0.21
9-31A (GREY)			0.1	0.2
9-31B			0.23	
9-31B (BLACK)				0.16
9-31B (DARK)				0.14
9-31C				0.06

PLANT NINE
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<1	3	<1
9-5		1	5	<1
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		133	155	180
9-1 (SCREEN AT INTERFACE)		69	97	123
9-1 (6-8 FT)	115			
9-2 (0-2 FT)	327			
9-2 (4-6 FT)	120			
9-14 (ASH OVERFLOW)		46	66	35
9-30 (LIQUOR SOUTH)		86		38
9-29 (LIQUOR SOUTHEAST)		141		39
9-26 (LIQUOR EAST)		104		36
WATERS UNDER POND:				
9-2		160	252	207
9-1 (14-16 FT)	85			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		273	218	92
9-36 (OFF 9-24)			213	167
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		41	62	
9-6 (SOUTH, DEEP)		50	85	39
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		42	85	37
9-8 (SOUTH, DEEP)		52	76	49
9-10A (NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		38	50	55
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		2	9	12
9-3 (LOW TIDE)		2		
9-3A (SHALLOW, SOUTH)		137	143	159
9-3A (LOW TIDE)		138		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		13	20	17
9-9 (SOUTH)		105	106	121
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<1	<1	2
9-23 (MIX OF SEEP 9-19 AND 9-27)		25		39
9-22 (SOUTH OF 9-23)		12	65	31
SEEPS:				
9-19 (EAST)		43	71	32
9-17 (SOUTHEAST)		48	85	40
9-16 (WEST)		80	138	

PLANT NINE
CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		79	79	79
9-11 (DEEP,WEST)		<1	<1	<1
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		2	<1	<1
9-13 (NORTH)		<1	<1	<1
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		66		63
9-20 (SOUTH)		64		64
9-21 (SOUTH)		50		46
9-24 (SOUTH)		60	66	96
9-34 (OTHER SIDE OF BAYOU)		16		13
9-34 (DISSOLVED SOLIDS)				23
9-25 (OTHER SIDE OF BAYOU)		61		96
ASH INFLUENTS				
9-31		298		
9-31A (CLEAR)			109	274
9-31A (GREY)			66	287
9-31B			67	
9-31B (BLACK)				182
9-31B (DARK)				163
9-31C				7

PLANT NINE
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		5.6	4.98	3.42
9-5		0.44	1.11	0.9
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.01	0.05	0.16
9-1 (SCREEN AT INTERFACE)		7.4	4.91	2.61
9-1 (6-8 FT)	2.66			
9-2 (0-2 FT)	7.1			
9-2 (4-6 FT)	37.7			
9-14 (ASH OVERFLOW)		82.3	88.6	3.17
9-30 (LIQUOR SOUTH)		196		1.97
9-29 (LIQUOR SOUTHEAST)		391		1.48
9-26 (LIQUOR EAST)		268		1.62
WATERS UNDER POND:				
9-2		8.37	14.7	11.1
9-1 (14-16 FT)	18.1			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		846	580	274
9-36 (OFF 9-24)			555	419
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		132	345	
9-6 (SOUTH, DEEP)		108	249	51.3
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		103	147	35.1
9-8 (SOUTH, DEEP)		128	129	40.4
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		61.7	42.3	19.5
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		63.6	127	145
9-3 (LOW TIDE)		60.1		
9-3A (SHALLOW, SOUTH)		194	280	175
9-3A (LOW TIDE)		195		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		189	299	158
9-9 (SOUTH)		262	237	240
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		2.3	2.2	5.06
9-23 (MIX OF SEEP 9-19 AND 9-27)		44.9		27.3
9-22 (SOUTH OF 9-23)		14.7	94.8	27.9
SEEPS:				
9-19 (EAST)		95.7	111	18.6
9-17 (SOUTHEAST)		202	120	51.9
9-16 (WEST)		20.8	13.4	

PLANT NINE
CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		317	280	256
9-11 (DEEP,WEST)		8.79	5.5	6.69
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		4.34	2.96	2.53
9-13 (NORTH)		7.44	7.25	12.2
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		199		65.9
9-20 (SOUTH)		186		124
9-21 (SOUTH)		129		45.4
9-24 (SOUTH)		106	92.6	104
9-34 (OTHER SIDE OF BAYOU)		97		15.2
9-34 (DISSOLVED SOLIDS)				9.58
9-25 (OTHER SIDE OF BAYOU)		202		175
ASH INFLUENTS				
9-31		852		
9-31A (CLEAR)			78.5	759
9-31A (GREY)			87.9	674
9-31B			94.1	
9-31B (BLACK)				327
9-31B (DARK)				473
9-31C				18

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PLANT NINE
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		0.05	0.04	0.07
9-5		0.02	0.02	0.02
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.01	<0.01	<0.01
9-1 (SCREEN AT INTERFACE)		0.33	0.37	0.2
9-1 (6-8 FT)	0.04			
9-2 (0-2 FT)	0.1			
9-2 (4-6 FT)	0.21			
9-14 (ASH OVERFLOW)		0.05	0.04	<0.01
9-30 (LIQUOR SOUTH)		<0.01		<0.01
9-29 (LIQUOR SOUTHEAST)		<0.01		<0.01
9-26 (LIQUOR EAST)		<0.01		<0.01
WATERS UNDER POND:				
9-2		0.03	0.03	0.01
9-1 (14-16 FT)	0.26			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.01	<0.01	<0.01
9-36 (OFF 9-24)			<0.01	<0.01
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		1.15	0.87	
9-6 (SOUTH, DEEP)		0.05	0.03	0.02
9-2A (WEST)		0.12	0.09	0.17
9-8A (SOUTH, SHALLOW)		0.11	0.09	0.08
9-8 (SOUTH, DEEP)				
9-10A(NORTH, SHALLOW)		0.07	0.05	0.03
9-10 (NORTH, DEEP)				
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		0.06	0.09	0.17
9-3 (LOW TIDE)		0.05		
9-3A (SHALLOW, SOUTH)		0.74	0.61	0.86
9-3A (LOW TIDE)		0.77		
9-7A (SHALLOW, SOUTH)		0.11	0.08	0.09
9-7 (DEEP, SOUTH)		0.07	0.04	0.05
9-9 (SOUTH)				
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.07	0.07	0.24
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.11		0.02
9-22 (SOUTH OF 9-23)		0.09	0.04	0.11
SEEPS:				
9-19 (EAST)		0.05	0.04	0.03
9-17 (SOUTHEAST)		1.07	0.02	0.83
9-16 (WEST)		0.02	0.05	

PLANT NINE
CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		14.1	14.3	19.3
9-11 (DEEP,WEST)		0.07	0.03	0.08
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		0.02	0.02	0.02
9-13 (NORTH)		0.05	0.06	0.11
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		0.26		0.46
9-20 (SOUTH)		2.16		3.21
9-21 (SOUTH)		0.25		0.2
9-24 (SOUTH)		0.04	0.02	0.56
9-34 (OTHER SIDE OF BAYOU)		0.13		0.08
9-34 (DISSOLVED SOLIDS)				0.05
9-25 (OTHER SIDE OF BAYOU)		0.06		0.05
ASH INFLUENTS				
9-31		<0.01		
9-31A (CLEAR)			<0.01	<0.01
9-31A (GREY)			0.01	<0.01
9-31B			0.01	
9-31B (BLACK)				<0.01
9-31B (DARK)				0.02
9-31C				0.04

PLANT NINE
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.8	<0.3	<0.5
9-5		<0.8	<0.3	<0.5
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		1	2.1	2
9-1 (SCREEN AT INTERFACE)		<0.8	<0.3	<0.5
9-1 (6-8 FT)	1.2			
9-2 (0-2 FT)	3.2			
9-2 (4-6 FT)	1.3			
9-14 (ASH OVERFLOW)		<0.8	0.3	<0.5
9-30 (LIQUOR SOUTH)		<0.8		0.6
9-29 (LIQUOR SOUTHEAST)		<0.8		0.6
9-26 (LIQUOR EAST)		0.9		0.6
WATERS UNDER POND:				
9-2		1.3	2.3	1.2
9-1 (14-16 FT)	1.3			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.8	<0.3	<0.5
9-36 (OFF 9-24)			<0.3	<0.5
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		<0.8	<0.3	
9-6 (SOUTH,DEEP)		<0.8	<0.3	<0.5
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		<0.8	<0.3	<0.5
9-8 (SOUTH,DEEP)		<0.8	<0.3	<0.5
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		<0.8	<0.3	<0.5
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		<0.8	<0.3	<0.5
9-3 (LOW TIDE)		<0.8		
9-3A (SHALLOW,SOUTH)		<0.8	<0.3	0.5
9-3A (LOW TIDE)		<0.8		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		<0.8	<0.3	<0.5
9-9 (SOUTH)		<0.8	<0.3	<0.5
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.8	<0.3	<0.5
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.8		<0.5
9-22 (SOUTH OF 9-23)		<0.8	0.3	<0.5
SEEPS:				
9-19 (EAST)		<0.8	<0.3	<0.5
9-17 (SOUTHEAST)		<0.8	0.3	<0.5
9-16 (WEST)		<0.8	<0.3	

PLANT NINE
CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.8	<0.3	2.7
9-11 (DEEP,WEST)		<0.8	<0.3	<0.5
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)		<0.8	<0.3	<0.5
9-12 (SOUTHEAST)		<0.8	<0.3	<0.5
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.8		<0.5
9-20 (SOUTH)		<0.8		<0.5
9-21 (SOUTH)		<0.8		<0.5
9-24 (SOUTH)		<0.8	0.4	<0.5
9-34 (OTHER SIDE OF BAYOU)		<0.8		<0.5
9-34 (DISSOLVED SOLIDS)				<0.5
9-25 (OTHER SIDE OF BAYOU)		<0.8		<0.5
ASH INFLUENTS				
9-31		<0.8		
9-31A (CLEAR)			1.1	0.6
9-31A (GREY)			0.3	0.9
9-31B			0.4	
9-31B (BLACK)				0.7
9-31B (DARK)				<0.5
9-31C				0.5

PLANT NINE
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		11	15	13
9-5		5	8	7
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		2630	2430	2240
9-1 (SCREEN AT INTERFACE)		767	1320	1910
9-1 (6-8 FT)	1460			
9-2 (0-2 FT)	7350			
9-2 (4-6 FT)	1820			
9-14 (ASH OVERFLOW)		1000	1330	439
9-30 (LIQUOR SOUTH)		2010		450
9-29 (LIQUOR SOUTHEAST)		3550		460
9-26 (LIQUOR EAST)		2580		431
WATERS UNDER POND:				
9-2		4740	5760	3910
9-1 (14-16 FT)	593			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		7020	4780	2220
9-36 (OFF 9-24)			4640	3290
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		1520	1840	
9-6 (SOUTH, DEEP)		895	1710	420
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		862	1650	466
9-8 (SOUTH, DEEP)		1190	1600	659
9-10A(NORTH, SHALLOW)			<1	
9-10 (NORTH, DEEP)		642	973	733
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		247	506	853
9-3 (LOW TIDE)		235		
9-3A (SHALLOW, SOUTH)		2630	2580	2260
9-3A (LOW TIDE)		2520		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		1540	1480	1260
9-9 (SOUTH)		2540	2520	2230
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		4	5	9
9-23 (MIX OF SEEP 9-19 AND 9-27)		454		473
9-22 (SOUTH OF 9-23)		134	1260	452
SEEPS:				
9-19 (EAST)		866	1340	432
9-17 (SOUTHEAST)		905	1530	427
9-16 (WEST)		1420	1950	

PLANT NINE
CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		1390	1180	993
9-11 (DEEP,WEST)		14	11	15
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		29	26	20
9-13 (NORTH)		18	40	72
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		1360		822
9-20 (SOUTH)		1350		859
9-21 (SOUTH)		1010		543
9-24 (SOUTH)		1310	1280	1180
9-34 (OTHER SIDE OF BAYOU)		383		206
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)		1560		1540
ASH INFLUENTS				
9-31		7150		
9-31A (CLEAR)			1470	6220
9-31A (GREY)			1270	6280
9-31B			1280	
9-31B (BLACK)				4400
9-31B (DARK)				3910
9-31C				113

PLANT NINE
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		0.09	<0.05	<0.05
9-5		<0.05	<0.05	<0.05
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		0.12	<0.05	0.07
9-1 (SCREEN AT INTERFACE)		0.11	0.06	0.08
9-1 (6-8 FT)	0.13			
9-2 (0-2 FT)	0.26			
9-2 (4-6 FT)	0.25			
9-14 (ASH OVERFLOW)		0.09	0.15	<0.05
9-30 (LIQUOR SOUTH)		0.07		<0.05
9-29 (LIQUOR SOUTHEAST)		0.14		<0.05
9-26 (LIQUOR EAST)		0.16		<0.05
WATERS UNDER POND:				
9-2		0.13	0.14	0.08
9-1 (14-16 FT)	0.15			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		0.11	0.13	<0.05
9-36 (OFF 9-24)			0.17	<0.05
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		0.39	0.38	
9-6 (SOUTH,DEEP)		0.1	0.13	<0.05
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		0.11	0.13	<0.05
9-8 (SOUTH,DEEP)		0.12	0.17	<0.05
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		0.13	0.17	0.05
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		0.08	<0.05	<0.05
9-3 (LOW TIDE)		0.05		
9-3A (SHALLOW,SOUTH)		0.12	0.09	0.08
9-3A (LOW TIDE)		0.14		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		0.11	<0.05	<0.05
9-9 (SOUTH)		0.14	0.13	0.06
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.05	0.09	<0.05
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.11		<0.05
9-22 (SOUTH OF 9-23)		0.11	0.17	<0.05
SEEPS:				
9-19 (EAST)		0.06	0.1	<0.05
9-17 (SOUTHEAST)		0.07	0.13	<0.05
9-16 (WEST)		0.15	0.2	

PLANT NINE
CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.39	0.25	<0.05
9-11 (DEEP,WEST)		0.09	0.13	<0.05
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)		0.07	<0.05	<0.05
9-12 (SOUTHEAST)		<0.05	<0.05	<0.05
9-13 (NORTH)				
SWAMP SURFACE WATERS:		0.09		<0.05
9-18 (SOUTH)		0.19		0.07
9-20 (SOUTH)		0.06		<0.05
9-21 (SOUTH)		0.15	0.15	0.05
9-24 (SOUTH)		0.08		<0.05
9-34 (OTHER SIDE OF BAYOU)				<0.05
9-34 (DISSOLVED SOLIDS)		0.13		<0.05
9-25 (OTHER SIDE OF BAYOU)				
ASH INFLUENTS		0.14		
9-31			0.17	0.1
9-31A (CLEAR)			0.13	0.1
9-31A (GREY)			0.17	
9-31B				0.1
9-31B (BLACK)				0.07
9-31B (DARK)				<0.05
9-31C				

PLANT NINE
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<3	0.6	0.6
9-5		<3	0.8	<0.6
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<3	1.4	0.9
9-1 (SCREEN AT INTERFACE)		<3	1.8	1.1
9-1 (6-8 FT)	0.6			
9-2 (0-2 FT)	1.1			
9-2 (4-6 FT)	0.9			
9-14 (ASH OVERFLOW)		<3	1.4	0.6
9-30 (LIQUOR SOUTH)		<3		0.6
9-29 (LIQUOR SOUTHEAST)		<3		<0.6
9-26 (LIQUOR EAST)		<3		0.6
WATERS UNDER POND:				
9-2		<3	2.1	1.1
9-1 (14-16 FT)	0.7			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<3	1.1	<0.6
9-36 (OFF 9-24)			1.9	0.7
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<3	1.6	
9-6 (SOUTH, DEEP)		<3	2.6	<0.6
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		<3	<0.6	<0.6
9-8 (SOUTH, DEEP)		<3	<0.6	<0.6
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<3	0.6	0.7
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<3	1.3	0.6
9-3 (LOW TIDE)		<3		
9-3A (SHALLOW, SOUTH)		<3	2.2	1
9-3A (LOW TIDE)		<3		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		<3	2	<0.6
9-9 (SOUTH)		<3	0.9	0.8
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<3	<0.6	<0.6
9-23 (MIX OF SEEP 9-19 AND 9-27)		<3		<0.6
9-22 (SOUTH OF 9-23)		<3	1.5	<0.6
SEEPS:				
9-19 (EAST)		<3	1.2	<0.6
9-17 (SOUTHEAST)		<3	1.3	0.9
9-16 (WEST)		<3	1.8	

PLANT NINE
CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<3	<0.6	<0.6
9-11 (DEEP,WEST)		<3	<0.6	<0.6
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<3	<0.6	0.6
9-13 (NORTH)		<3	<0.6	<0.6
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<3		0.6
9-20 (SOUTH)		<3		0.9
9-21 (SOUTH)		<3		<0.6
9-24 (SOUTH)		<3	1.3	0.7
9-34 (OTHER SIDE OF BAYOU)		<3		<0.6
9-34 (DISSOLVED SOLIDS)				<0.6
9-25 (OTHER SIDE OF BAYOU)		<3		<0.6
ASH INFLUENTS				
9-31		<3		
9-31A (CLEAR)			2	1.3
9-31A (GREY)			1.7	1.4
9-31B			1.7	
9-31B (BLACK)				1.2
9-31B (DARK)				1.1
9-31C				0.8

PLANT NINE
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.1	<0.1	<0.05
9-5		<0.1	<0.1	<0.05
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.1	<0.1	<0.05
9-1 (SCREEN AT INTERFACE)		<0.1	<0.1	<0.05
9-1 (6-8 FT)	<0.05			
9-2 (0-2 FT)	<0.05			
9-2 (4-6 FT)	<0.05			
9-14 (ASH OVERFLOW)		<0.1	<0.1	<0.05
9-30 (LIQUOR SOUTH)		<0.1		<0.05
9-29 (LIQUOR SOUTHEAST)		<0.1		<0.05
9-26 (LIQUOR EAST)		<0.1		<0.05
WATERS UNDER POND:				
9-2		<0.1	<0.1	<0.05
9-1 (14-16 FT)	<0.05			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.1	<0.1	<0.05
9-36 (OFF 9-24)			<0.1	<0.05
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		<0.1	<0.1	
9-6 (SOUTH,DEEP)		<0.1	<0.1	<0.05
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		<0.1	<0.1	<0.05
9-8 (SOUTH,DEEP)		<0.1	<0.1	<0.05
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		<0.1	<0.1	<0.05
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		<0.1	<0.1	<0.05
9-3 (LOW TIDE)		<0.1		
9-3A (SHALLOW,SOUTH)		<0.1	<0.1	<0.05
9-3A (LOW TIDE)		<0.1		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		<0.1	<0.1	<0.05
9-9 (SOUTH)		<0.1	<0.1	<0.05
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.1	<0.1	<0.05
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.1		<0.05
9-22 (SOUTH OF 9-23)		<0.1	<0.1	<0.05
SEEPS:				
9-19 (EAST)		<0.1	<0.1	<0.05
9-17 (SOUTHEAST)		<0.1	<0.1	<0.05
9-16 (WEST)		<0.1	<0.1	

PLANT NINE
CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.1	<0.1	<0.05
9-11 (DEEP,WEST)		<0.1	<0.1	<0.05
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.1	<0.1	<0.05
9-13 (NORTH)		<0.1	<0.1	<0.05
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		0.1		<0.05
9-20 (SOUTH)		<0.1		<0.05
9-21 (SOUTH)		<0.1		<0.05
9-24 (SOUTH)		<0.1	<0.1	<0.05
9-34 (OTHER SIDE OF BAYOU)		<0.1		<0.05
9-34 (DISSOLVED SOLIDS)				<0.05
9-25 (OTHER SIDE OF BAYOU)		<0.1		<0.05
ASH INFLUENTS				
9-31		<0.1		
9-31A (CLEAR)			<0.1	<0.05
9-31A (GREY)			<0.1	<0.05
9-31B			<0.1	
9-31B (BLACK)				<0.05
9-31B (DARK)				<0.05
9-31C				<0.05

PLANT NINE
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		6.63	6.94	7.15
9-5		4.89	4.93	4.72
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		5.67	4.9	4.43
9-1 (SCREEN AT INTERFACE)		1.75	1.44	1.73
9-1 (6-8 FT)	0.1			
9-2 (0-2 FT)	<0.05			
9-2 (4-6 FT)	<0.05			
9-14 (ASH OVERFLOW)		2.22	1.93	3.1
9-30 (LIQUOR SOUTH)		2.22		2.15
9-29 (LIQUOR SOUTHEAST)		2.3		3.36
9-26 (LIQUOR EAST)		1.95		2.94
WATERS UNDER POND:				
9-2		0.69	0.65	1.28
9-1 (14-16 FT)	1.37			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.05	0.51	<0.05
9-36 (OFF 9-24)			0.57	<0.05
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		24.2	28.5	
9-6 (SOUTH, DEEP)		18.3	15.2	23
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		13.6	11.8	16.5
9-8 (SOUTH, DEEP)		11.7	9.84	9.69
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		1.89	2.02	2.23
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		3.51	3.28	3.14
9-3 (LOW TIDE)		3.25		
9-3A (SHALLOW, SOUTH)		0.5	1.52	0.39
9-3A (LOW TIDE)		0.54		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		3.71	4.23	3.06
9-9 (SOUTH)		0.75	1.58	<0.05
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		2.22	1.84	4.9
9-23 (MIX OF SEEP 9-19 AND 9-27)		2.52		3.42
9-22 (SOUTH OF 9-23)		2.6	1.58	3.84
SEEPS:				
9-19 (EAST)		2.27	1.55	3.15
9-17 (SOUTHEAST)		4.05	2.86	7.2
9-16 (WEST)		1.05	1.72	

Note that wrong sw was 0?

PLANT NINE
CONCENTRATION OF 26 SILICON PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		2.8	2.6	1.23
9-11 (DEEP,WEST)		9.61	9.48	9.07
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)		3.81	2.16	3.6
9-12 (SOUTHEAST)		4.75	3.48	4.57
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		2.2		4.72
9-20 (SOUTH)		14.9		19.2
9-21 (SOUTH)		5.17		5.88
9-24 (SOUTH)		4.83	1.59	6.67
9-34 (OTHER SIDE OF BAYOU)		6.9		6.31
9-34 (DISSOLVED SOLIDS)				4.4
9-25 (OTHER SIDE OF BAYOU)		2.89		1
ASH INFLUENTS				
9-31		5.71		
9-31A (CLEAR)			4.26	<0.05
9-31A (GREY)			2.93	<0.05
9-31B			2.91	
9-31B (BLACK)				<0.05
9-31B (DARK)				0.15
9-31C				7.69

Note: All the Si data is questionable in sea-water matrix. Since recovery is <3% in seawater and blanks read 1-2 ppm

PLANT NINE
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		0.308	0.275	0.319
9-5		0.036	0.055	0.036
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		18.9	23.6	24.3
9-1 (SCREEN AT INTERFACE)		3.89	4.38	7.15
9-1 (6-8 FT)	22			
9-2 (0-2 FT)	62.9			
9-2 (4-6 FT)	42.1			
9-14 (ASH OVERFLOW)		3.78	4.13	4.46
9-30 (LIQUOR SOUTH)		4.4		4.66
9-29 (LIQUOR SOUTHEAST)		5.01		4.94
9-26 (LIQUOR EAST)		4.37		4.51
WATERS UNDER POND:				
9-2		33.6	61.9	36.6
9-1 (14-16 FT)	4.64			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		3.75	2.77	1.49
9-36 (OFF 9-24)			2.71	2.48
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		3.02	3.67	
9-6 (SOUTH,DEEP)		4.02	4.62	2.9
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		3.64	3.66	2.76
9-8 (SOUTH,DEEP)		4.05	3.84	2.65
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		9.43	10.8	11.3
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		0.417	0.618	1.21
9-3 (LOW TIDE)		0.376		
9-3A (SHALLOW,SOUTH)		2.97	3.07	3.6
9-3A (LOW TIDE)		2.94		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		0.865	0.867	0.812
9-9 (SOUTH)		4.93	4.61	5.41
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.037	0.04	0.073
9-23 (MIX OF SEEP 9-19 AND 9-27)		2.25		2.49
9-22 (SOUTH OF 9-23)		0.624	4.29	2.24
SEEPS:				
9-19 (EAST)		3.32	3.79	2.93
9-17 (SOUTHEAST)		4.18	3.97	2.79
9-16 (WEST)		12.1	14.8	

PLANT NINE
CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		1.94	1.86	1.89
9-11 (DEEP,WEST)		0.308	0.275	0.308
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)		0.167	0.151	0.196
9-12 (SOUTHEAST)		0.193	0.193	0.269
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		6.09		4.35
9-20 (SOUTH)		6.21		5.91
9-21 (SOUTH)		4.12		3.82
9-24 (SOUTH)		4.39	3.88	4.63
9-34 (OTHER SIDE OF BAYOU)		0.383		0.079
9-34 (DISSOLVED SOLIDS)				0.064
9-25 (OTHER SIDE OF BAYOU)		1.05		1.11
ASH INFLUENTS				
9-31		8.06		
9-31A (CLEAR)			5.61	4.37
9-31A (GREY)			4.18	5.83
9-31B			4.05	
9-31B (BLACK)				6.56
9-31B (DARK)				3.4
9-31C				0.979

PLANT NINE
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.15	<0.06	0.02
9-5		<0.15	<0.06	0.01
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.15	<0.06	<0.01
9-1 (SCREEN AT INTERFACE)		<0.15	<0.06	<0.01
9-1 (6-8 FT)	0.25			
9-2 (0-2 FT)	0.09			
9-2 (4-6 FT)	0.18			
9-14 (ASH OVERFLOW)		<0.15	<0.06	<0.01
9-30 (LIQUOR SOUTH)		<0.15		0.04
9-29 (LIQUOR SOUTHEAST)		<0.15		0.02
9-26 (LIQUOR EAST)		<0.15		0.05
WATERS UNDER POND:				
9-2		<0.15	<0.06	<0.01
9-1 (14-16 FT)	0.19			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.15	<0.06	0.04
9-36 (OFF 9-24)			<0.06	0.05
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<0.15	<0.06	
9-6 (SOUTH, DEEP)		<0.15	<0.06	0.01
9-2A (WEST)		<0.15	<0.06	<0.01
9-8A (SOUTH, SHALLOW)		<0.15	<0.06	<0.01
9-8 (SOUTH, DEEP)				
9-10A (NORTH, SHALLOW)		<0.15	<0.06	<0.01
9-10 (NORTH, DEEP)				
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.15	0.08	0.05
9-3 (LOW TIDE)		<0.15		
9-3A (SHALLOW, SOUTH)		<0.15	<0.06	0.08
9-3A (LOW TIDE)		<0.15		
9-7A (SHALLOW, SOUTH)		<0.15	<0.06	0.05
9-7 (DEEP, SOUTH)		<0.15	<0.06	<0.01
9-9 (SOUTH)				
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.15	<0.06	0.09
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.15		0.02
9-22 (SOUTH OF 9-23)		0.2	<0.06	0.02
SEEPS:				
9-19 (EAST)		<0.15	<0.06	0.03
9-17 (SOUTHEAST)		<0.15	<0.06	<0.01
9-16 (WEST)		<0.15	<0.06	

PLANT NINE
CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		<0.15	<0.06	<0.01
9-11 (DEEP,WEST)		<0.15	<0.06	<0.01
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.15	<0.06	<0.01
9-13 (NORTH)		<0.15	<0.06	<0.01
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.15		<0.01
9-20 (SOUTH)		<0.15		0.04
9-21 (SOUTH)		<0.15		0.05
9-24 (SOUTH)		<0.15	<0.06	<0.01
9-34 (OTHER SIDE OF BAYOU)		<0.15		0.01
9-34 (DISSOLVED SOLIDS)				0.15
9-25 (OTHER SIDE OF BAYOU)		0.15		0.06
ASH INFLUENTS				
9-31		<0.15		
9-31A (CLEAR)			<0.06	0.14
9-31A (GREY)			<0.06	0.11
9-31B			<0.06	
9-31B (BLACK)				0.12
9-31B (DARK)				0.12
9-31C				0.14

Note: Data in this site report which are above detection limit may not be real since blanks for the program generally ranged from <0.01 to 0.05 ppm.

PLANT NINE
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.005	<0.005	<0.005
9-5		<0.005	<0.005	<0.005
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.005	<0.005	<0.005
9-1 (SCREEN AT INTERFACE)		<0.005	<0.005	<0.005
9-1 (6-8 FT)	<0.005			
9-2 (0-2 FT)	<0.005			
9-2 (4-6 FT)	0.008			
9-14 (ASH OVERFLOW)		<0.005	<0.005	<0.005
9-30 (LIQUOR SOUTH)		<0.005		<0.005
9-29 (LIQUOR SOUTHEAST)		0.011		<0.005
9-26 (LIQUOR EAST)		0.017		<0.005
WATERS UNDER POND:				
9-2		<0.005	<0.005	<0.005
9-1 (14-16 FT)	<0.005			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.005	0.01	<0.005
9-36 (OFF 9-24)			0.006	<0.005
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		<0.005	<0.005	
9-6 (SOUTH, DEEP)		<0.005	<0.005	<0.005
9-2A (WEST)		<0.005	<0.005	<0.005
9-8A (SOUTH, SHALLOW)		<0.005	<0.005	<0.005
9-8 (SOUTH, DEEP)				
9-10A(NORTH, SHALLOW)		<0.005	<0.005	<0.005
9-10 (NORTH, DEEP)				
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.005	<0.005	<0.005
9-3 (LOW TIDE)		<0.005		
9-3A (SHALLOW, SOUTH)		<0.005	<0.005	<0.005
9-3A (LOW TIDE)		<0.005		
9-7A (SHALLOW, SOUTH)		0.006	<0.005	<0.005
9-7 (DEEP, SOUTH)		<0.005	<0.005	<0.005
9-9 (SOUTH)				
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.02	<0.005	0.005
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.019		<0.005
9-22 (SOUTH OF 9-23)		0.024	0.01	<0.005
SEEPS:				
9-19 (EAST)		<0.005	0.007	<0.005
9-17 (SOUTHEAST)		<0.005	<0.005	<0.005
9-16 (WEST)		<0.005	0.007	

PLANT NINE
CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.013	0.012	0.009
9-11 (DEEP,WEST)		<0.005	<0.005	<0.005
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		0.014	<0.005	<0.005
9-13 (NORTH)		<0.005	<0.005	<0.005
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.005		<0.005
9-20 (SOUTH)		0.016		<0.005
9-21 (SOUTH)		<0.005		<0.005
9-24 (SOUTH)		0.017	0.006	<0.005
9-34 (OTHER SIDE OF BAYOU)		<0.005		0.016
9-34 (DISSOLVED SOLIDS)				0.026
9-25 (OTHER SIDE OF BAYOU)		0.019		<0.005
ASH INFLUENTS				
9-31		<0.005		
9-31A (CLEAR)			0.007	0.007
9-31A (GREY)			0.01	0.006
9-31B			0.008	
9-31B (BLACK)				0.008
9-31B (DARK)				<0.005
9-31C				0.009

PLANT NINE
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<0.005	<0.005	<0.005
9-5		0.014	<0.005	<0.005
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		0.182	0.113	0.081
9-1 (SCREEN AT INTERFACE)		<0.005	<0.005	<0.005
9-1 (6-8 FT)	0.17			
9-2 (0-2 FT)	0.017			
9-2 (4-6 FT)	0.024			
9-14 (ASH OVERFLOW)		0.021	0.045	0.101
9-30 (LIQUOR SOUTH)		0.052		0.116
9-29 (LIQUOR SOUTHEAST)		0.113		0.122
9-26 (LIQUOR EAST)		0.145		0.12
WATERS UNDER POND:				
9-2		<0.005	<0.005	0.028
9-1 (14-16 FT)	0.037			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.005	0.039	0.022
9-36 (OFF 9-24)			0.053	0.031
IKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		0.113	0.264	
9-6 (SOUTH,DEEP)		<0.005	<0.005	0.007
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		<0.005	0.018	<0.005
9-8 (SOUTH,DEEP)		<0.005	0.024	0.006
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		<0.005	<0.005	<0.005
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		<0.005	<0.005	0.021
9-3 (LOW TIDE)		<0.005		
9-3A (SHALLOW,SOUTH)		<0.005	<0.005	0.027
9-3A (LOW TIDE)		0.006		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		0.031	0.021	0.024
9-9 (SOUTH)		<0.005	0.028	0.011
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		0.01	<0.005	0.015
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.035		0.007
9-22 (SOUTH OF 9-23)		0.047	0.051	<0.005
SEEPS:				
9-19 (EAST)		<0.005	0.014	0.008
9-17 (SOUTHEAST)		<0.005	0.016	<0.005
9-16 (WEST)		0.018	0.071	

PLANT NINE
CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.114	0.123	0.094
9-11 (DEEP,WEST)		0.007	<0.005	<0.005
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		0.039	0.042	0.008
9-13 (NORTH)		<0.005	0.015	<0.005
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.005		<0.005
9-20 (SOUTH)		0.033		0.012
9-21 (SOUTH)		<0.005		0.012
9-24 (SOUTH)		0.032	0.006	0.008
9-34 (OTHER SIDE OF BAYOU)		0.014		0.021
9-34 (DISSOLVED SOLIDS)				0.038
9-25 (OTHER SIDE OF BAYOU)		0.049		0.017
ASH INFLUENTS				
9-31		0.404		
9-31A (CLEAR)			0.871	0.067
9-31A (GREY)			0.061	0.225
9-31B			0.013	
9-31B (BLACK)				0.052
9-31B (DARK)				0.059
9-31C				0.082

PLANT NINE
CONCENTRATION OF 31 ZINC

PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		<0.05	0.06	0.21
9-5		<0.05	<0.05	<0.05
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.05	<0.05	<0.05
9-1 (SCREEN AT INTERFACE)		0.06	<0.05	<0.05
9-1 (6-8 FT)	0.06			
9-2 (0-2 FT)	0.11			
9-2 (4-6 FT)	0.33			
9-14 (ASH OVERFLOW)		0.07	0.09	<0.05
9-30 (LIQUOR SOUTH)		0.11		<0.05
9-29 (LIQUOR SOUTHEAST)		0.16		<0.05
9-26 (LIQUOR EAST)		0.12		<0.05
WATERS UNDER POND:				
9-2		0.06	0.06	0.06
9-1 (14-16 FT)	0.1			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		0.65	0.12	<0.05
9-36 (OFF 9-24)			0.11	<0.05
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		0.98	0.71	
9-6 (SOUTH, DEEP)		<0.05	<0.05	<0.05
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		0.09	0.11	0.06
9-8 (SOUTH, DEEP)		0.05	0.08	<0.05
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		<0.05	0.08	<0.05
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.05	<0.05	<0.05
9-3 (LOW TIDE)		<0.05		
9-3A (SHALLOW, SOUTH)		0.11	0.1	<0.05
9-3A (LOW TIDE)		0.11		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		0.16	<0.05	<0.05
9-9 (SOUTH)		0.11	0.12	<0.05
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.05	<0.05	<0.05
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.06		<0.05
9-22 (SOUTH OF 9-23)		0.08	0.07	<0.05
SEEPS:				
9-19 (EAST)		<0.05	0.07	<0.05
9-17 (SOUTHEAST)		<0.05	0.08	<0.05
9-16 (WEST)		0.06	0.12	

PLANT NINE
CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.16	0.26	<0.05
9-11 (DEEP,WEST)		<0.05	<0.05	<0.05
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.05	<0.05	<0.05
9-13 (NORTH)		<0.05	<0.05	<0.05
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.05		<0.05
9-20 (SOUTH)		0.22		0.09
9-21 (SOUTH)		<0.05		<0.05
9-24 (SOUTH)		0.06	0.07	<0.05
9-34 (OTHER SIDE OF BAYOU)		0.08		0.23
9-34 (DISSOLVED SOLIDS)				0.08
9-25 (OTHER SIDE OF BAYOU)		0.1		<0.05
ASH INFLUENTS				
9-31		0.28		
9-31A (CLEAR)			0.09	<0.05
9-31A (GREY)			0.07	<0.05
9-31B			0.07	
9-31B (BLACK)				<0.05
9-31B (DARK)				<0.05
9-31C				<0.05

PLANT NINE
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.05	<0.05	<0.05
9-5		<0.05	<0.05	<0.05
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		<0.05	<0.05	<0.05
9-1 (SCREEN AT INTERFACE)		<0.05	<0.05	<0.05
9-1 (6-8 FT)	<0.05			
9-2 (0-2 FT)	<0.05			
9-2 (4-6 FT)	<0.05			
9-14 (ASH OVERFLOW)		<0.05	<0.05	<0.05
9-30 (LIQUOR SOUTH)		<0.05		<0.05
9-29 (LIQUOR SOUTHEAST)		<0.05		<0.05
9-26 (LIQUOR EAST)		0.08		<0.05
WATERS UNDER POND:				
9-2		<0.05	<0.05	<0.05
9-1 (14-16 FT)	<0.05			
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.05	<0.05	<0.05
9-36 (OFF 9-24)			<0.05	<0.05
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		0.05	<0.05	
9-6 (SOUTH,DEEP)		<0.05	<0.05	<0.05
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)		<0.05	<0.05	<0.05
9-8 (SOUTH,DEEP)		<0.05	<0.05	<0.05
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)		<0.05	<0.05	<0.05
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		<0.05	<0.05	<0.05
9-3 (LOW TIDE)		<0.05		
9-3A (SHALLOW,SOUTH)		<0.05	<0.05	<0.05
9-3A (LOW TIDE)		<0.05		
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		0.07	<0.05	<0.05
9-9 (SOUTH)		<0.05	<0.05	<0.05
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		<0.05	<0.05	<0.05
9-23 (MIX OF SEEP 9-19 AND 9-27)		0.07		<0.05
9-22 (SOUTH OF 9-23)		0.08	<0.05	<0.05
SEEPS:				
9-19 (EAST)		<0.05	<0.05	<0.05
9-17 (SOUTHEAST)		<0.05	<0.05	<0.05
9-16 (WEST)		<0.05	<0.05	

PLANT NINE
CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		0.08	0.05	<0.05
9-11 (DEEP,WEST)		<0.05	<0.05	<0.05
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		<0.05	<0.05	<0.05
9-13 (NORTH)		<0.05	<0.05	<0.05
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		<0.05		<0.05
9-20 (SOUTH)		0.07		<0.05
9-21 (SOUTH)		<0.05		<0.05
9-24 (SOUTH)		0.06	<0.05	<0.05
9-34 (OTHER SIDE OF BAYOU)		<0.05		<0.05
9-34 (DISSOLVED SOLIDS)				<0.05
9-25 (OTHER SIDE OF BAYOU)		0.07		<0.05
ASH INFLUENTS				
9-31		<0.05		
9-31A (CLEAR)			<0.05	<0.05
9-31A (GREY)			<0.05	<0.05
9-31B			<0.05	
9-31B (BLACK)				<0.05
9-31B (DARK)				<0.05
9-31C				<0.05

PLANT NINE
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		0.88	0.3	0.3
9-5		1.2		
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		5		
9-1 (SCREEN AT INTERFACE)		11		
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)		3	4.5	1
9-30 (LIQUOR SOUTH)		7		
9-29 (LIQUOR SOUTHEAST)		7		
9-26 (LIQUOR EAST)		6		
WATERS UNDER POND:				
9-2				
9-1 (14-16 FT)		8	6.3	6.9
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		0.6	1.2	0.8
9-36 (OFF 9-24)				
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		13		
9-6 (SOUTH, DEEP)				
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)				
9-8 (SOUTH, DEEP)				
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)				
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		<0.2		
9-3 (LOW TIDE)				
9-3A (SHALLOW, SOUTH)			0.5	<0.1
9-3A (LOW TIDE)				
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		<0.15		
9-9 (SOUTH)		<0.15		
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)				
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.2		
9-22 (SOUTH OF 9-23)				
SEEPS:				
9-19 (EAST)				
9-17 (SOUTHEAST)		1		
9-16 (WEST)			1.4	

PLANT NINE
CONCENTRATION OF 33 ARSENIC (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)			1.5	0.8
9-11 (DEEP,WEST)				
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)				
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)				
9-20 (SOUTH)				
9-21 (SOUTH)				
9-24 (SOUTH)		<0.15		
9-34 (OTHER SIDE OF BAYOU)		<0.15		
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)				
ASH INFLUENTS				
9-31		31		
9-31A (CLEAR)				
9-31A (GREY)			18.7	13
9-31B				
9-31B (BLACK)				
9-31B (DARK)				
9-31C				

PLANT NINE
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		<0.26	<0.1	<0.1
9-5		<0.26		
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		0.4		
9-1 (SCREEN AT INTERFACE)		0.3		
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)		1.2	1.2	1.6
9-30 (LIQUOR SOUTH)		1.9		
9-29 (LIQUOR SOUTHEAST)		2.5		
9-26 (LIQUOR EAST)		2		
WATERS UNDER POND:				
9-2		3.8	4	0.6
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		<0.26	<0.1	<0.1
9-36 (OFF 9-24)				
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH,SHALLOW)		0.2		
9-6 (SOUTH,DEEP)				
9-2A (WEST)				
9-8A (SOUTH,SHALLOW)				
9-8 (SOUTH,DEEP)				
9-10A(NORTH,SHALLOW)				
9-10 (NORTH,DEEP)				
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP,SOUTH)		<0.2		
9-3 (LOW TIDE)				
9-3A (SHALLOW,SOUTH)			<0.1	<0.1
9-3A (LOW TIDE)				
9-7A (SHALLOW,SOUTH)				
9-7 (DEEP,SOUTH)		<0.26		
9-9 (SOUTH)		<0.26		
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)				
9-23 (MIX OF SEEP 9-19 AND 9-27)		<0.2		
9-22 (SOUTH OF 9-23)				
SEEPS:				
9-19 (EAST)				
9-17 (SOUTHEAST)		<0.2		
9-16 (WEST)			<0.1	

PLANT NINE
CONCENTRATION OF 34 SELENIUM (LIQUID) PPB

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)			<0.1	<0.1
9-11 (DEEP,WEST)				
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)				
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)				
9-20 (SOUTH)				
9-21 (SOUTH)		<0.26		
9-24 (SOUTH)		<0.26		
9-34 (OTHER SIDE OF BAYOU)				
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)				
ASH INFLUENTS		4.5		
9-31				
9-31A (CLEAR)			4.2	0.9
9-31A (GREY)				
9-31B				
9-31B (BLACK)				
9-31B (DARK)				
9-31C				

PLANT NINE
CONCENTRATION OF 37 PH LAB -

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		6.9		
9-5		6.5		
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		11		
9-1 (SCREEN AT INTERFACE)		8.4		
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)		8.2		
9-30 (LIQUOR SOUTH)		9.1		
9-29 (LIQUOR SOUTHEAST)		9.5		
9-26 (LIQUOR EAST)		9.4		
WATERS UNDER POND:				
9-2		9.5		
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		7.9		
9-36 (OFF 9-24)				
IKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		3.6		
9-6 (SOUTH, DEEP)		6.3		
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		6		
9-8 (SOUTH, DEEP)		7.4		
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		7.3		
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		6.7		
9-3 (LOW TIDE)		6.8		
9-3A (SHALLOW, SOUTH)		4.9		
9-3A (LOW TIDE)		5		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		4.4		
9-9 (SOUTH)		6.3		
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		3.8		
9-23 (MIX OF SEEP 9-19 AND 9-27)		6.7		
9-22 (SOUTH OF 9-23)		4.6		
SEEPS:				
9-19 (EAST)		6.3		
9-17 (SOUTHEAST)		7.5		
9-16 (WEST)		9		

PLANT NINE
CONCENTRATION OF 37 PH LAB -

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		4.2		
9-11 (DEEP,WEST)		7.5		
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)				
9-12 (SOUTHEAST)		7		
9-13 (NORTH)		7		
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		6.5		
9-20 (SOUTH)		3.3		
9-21 (SOUTH)		6.4		
9-24 (SOUTH)		7.4		
9-34 (OTHER SIDE OF BAYOU)		3.5		
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)		5.1		
ASH INFLUENTS				
9-31		9.6		
9-31A (CLEAR)				
9-31A (GREY)				
9-31B				
9-31B (BLACK)				
9-31B (DARK)				
9-31C				

PLANT NINE
CONCENTRATION OF 38 PH FIELD -

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		6.5	7.1	6.8
9-5		6	6	6.1
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		10.6	11	10.7
9-1 (SCREEN AT INTERFACE)		8	6	6.3
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)		8.1	8.7	10.2
9-30 (LIQUOR SOUTH)				8.9
9-29 (LIQUOR SOUTHEAST)				10.5
9-26 (LIQUOR EAST)				10.1
WATERS UNDER POND:				
9-2		9.2	9.5	8.6
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		7.5	7.9	7.3
9-36 (OFF 9-24)		7.9	8.4	
LIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		3.6	3.1	
9-6 (SOUTH, DEEP)		6.2	6.7	6.5
9-2A (WEST)			6.4	
9-8A (SOUTH, SHALLOW)			6.3	6.5
9-8 (SOUTH, DEEP)			6.7	6.6
9-10A(NORTH, SHALLOW)			7.1	
9-10 (NORTH, DEEP)		6.9	5.6	6.9
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		6.7	6.7	6.1
9-3 (LOW TIDE)		6.7		
9-3A (SHALLOW, SOUTH)		4.6	4.5	5
9-3A (LOW TIDE)				
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		4.4	2.9	4.3
9-9 (SOUTH)		5.7	6.1	4.9
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		4.1	4	3.4
9-23 (MIX OF SEEP 9-19 AND 9-27)				7.1
9-22 (SOUTH OF 9-23)		6	7	6.7
SEEPS:				
9-19 (EAST)		6.8	6.9	7.2
9-17 (SOUTHEAST)		7.3	7.7	7.4
9-16 (WEST)		8.9	9.1	

PLANT NINE
CONCENTRATION OF 38 PH FIELD

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		4.6	4.9	5.8
9-11 (DEEP,WEST)		7	7.1	7.2
9-12A (SOUTHEAST)			6.7	
9-12B (SOUTHEAST)		7.6	6.5	7
9-12 (SOUTHEAST)		6.8	6.7	7.1
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		6.5		7
9-20 (SOUTH)				4.1
9-21 (SOUTH)		7.1		6.6
9-24 (SOUTH)		6.7	6.4	6.6
9-34 (OTHER SIDE OF BAYOU)			5.5	
9-34 (DISSOLVED SOLIDS)				6.4
9-25 (OTHER SIDE OF BAYOU)				
ASH INFLUENTS				
9-31			8.8	8.1
9-31A (CLEAR)			10	9.6
9-31A (GREY)			8.4	
9-31B				9.55
9-31B (BLACK)				7.7
9-31B (DARK)				7.4
9-31C				

PLANT NINE
CONCENTRATION OF 39 CONDUCTIVITY LAB UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
BACKGROUND:				
9-4		460		
9-5		85		
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		14000		
9-1 (SCREEN AT INTERFACE)		5700		
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)		6500		
9-30 (LIQUOR SOUTH)		12000		
9-29 (LIQUOR SOUTHEAST)		17400		
9-26 (LIQUOR EAST)		14500		
WATERS UNDER POND:				
9-2		33000		
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		43000		
9-36 (OFF 9-24)				
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		10700		
9-6 (SOUTH, DEEP)		5100		
9-2A (WEST)				
9-8A (SOUTH, SHALLOW)		6000		
9-8 (SOUTH, DEEP)		6100		
9-10A(NORTH, SHALLOW)				
9-10 (NORTH, DEEP)		5500		
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		2000		
9-3 (LOW TIDE)		2000		
9-3A (SHALLOW, SOUTH)		13400		
9-3A (LOW TIDE)		12000		
9-7A (SHALLOW, SOUTH)				
9-7 (DEEP, SOUTH)		8300		
9-9 (SOUTH)		13000		
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		120		
9-23 (MIX OF SEEP 9-19 AND 9-27)		3400		
9-22 (SOUTH OF 9-23)		990		
SEEPS:				
9-19 (EAST)		4800		
9-17 (SOUTHEAST)		5300		
9-16 (WEST)		9400		

PLANT NINE
CONCENTRATION OF 39 CONDUCTIVITY LAB UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		10200		
9-11 (DEEP,WEST)		610		
9-12A (SOUTHEAST)				
9-12B (SOUTHEAST)		450		
9-12 (SOUTHEAST)		460		
9-13 (NORTH)				
SWAMP SURFACE WATERS:		7500		
9-18 (SOUTH)		11000		
9-20 (SOUTH)		5500		
9-21 (SOUTH)		8000		
9-24 (SOUTH)		2300		
9-34 (OTHER SIDE OF BAYOU)				
9-34 (DISSOLVED SOLIDS)		6900		
9-25 (OTHER SIDE OF BAYOU)				
ASH INFLUENTS		51000		
9-31				
9-31A (CLEAR)				
9-31A (GREY)				
9-31B				
9-31B (BLACK)				
9-31B (DARK)				
9-31C				

PLANT NINE
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282	82382
BACKGROUND:				
9-4		525	490	480
9-5		88	80	89
9-13A				
POND LIQUORS:				
9-1A (SCREEN IN ASH)		15000	13000	14400
9-1 (SCREEN AT INTERFACE)		6600	9700	13300
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)		6100	9000	3500
9-14 (ASH OVERFLOW)		12900		3600
9-30 (LIQUOR SOUTH)		18000		3500
9-29 (LIQUOR SOUTHEAST)		1500		3500
9-26 (LIQUOR EAST)				
WATERS UNDER POND:				
9-2		30000	36800	26200
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)		33000	29200	13800
9-36 (OFF 9-24)		30000	23000	
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)		12000	13200	
9-6 (SOUTH, DEEP)		6100	10900	3500
9-2A (WEST)			8900	
9-8A (SOUTH, SHALLOW)		6100	10400	3500
9-8 (SOUTH, DEEP)		7200	10600	4400
9-10A(NORTH, SHALLOW)			5900	
9-10 (NORTH, DEEP)		5000	7400	5500
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)		1800	3700	6200
9-3 (LOW TIDE)		2000		
9-3A (SHALLOW, SOUTH)		15500	15400	14800
9-3A (LOW TIDE)				
9-7A (SHALLOW, SOUTH)		9600	9000	8500
9-7 (DEEP, SOUTH)		13500	15000	14800
9-9 (SOUTH)				
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)		123	120	370
9-23 (MIX OF SEEP 9-19 AND 9-27)		2800		3300
9-22 (SOUTH OF 9-23)		1040	9100	3250
SEEPS:				
9-19 (EAST)		5500	9900	3100
9-17 (SOUTHEAST)		6000	9000	3300
9-16 (WEST)		10600	13000	

PLANT NINE
CONCENTRATION OF 40 CONDUCTIVITY FIELD UMHOS/CM

SAMPLING POINT DESIGNATION	TRIPS			
	120281	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)		12500	11200	12100
9-11 (DEEP,WEST)		570	525	540
9-12A (SOUTHEAST)			9800	
9-12B (SOUTHEAST)		420	320	400
9-12 (SOUTHEAST)		525	710	930
9-13 (NORTH)				
SWAMP SURFACE WATERS:				
9-18 (SOUTH)		9000		5700
9-20 (SOUTH)		10750		7100
9-21 (SOUTH)		5700		4100
9-24 (SOUTH)		8250	11500	8500
9-34 (OTHER SIDE OF BAYOU)		9500	1390	
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)		8250		10500
ASH INFLUENTS				
9-31			8900	42900
9-31A (CLEAR)			9200	43200
9-31A (GREY)			8200	
9-31B				10000
9-31B (BLACK)				27750
9-31B (DARK)				1300
9-31C				

PLANT NINE
CONCENTRATION OF 41 GROUNDWATER LEVEL FT (Mean Sea Level)

SAMPLING POINT DESIGNATION	TRIPS 122081	20282	32282	82382
BACKGROUND:				
9-4	1.5	2.4	2.5	2.9
9-5	6.1	7.1	6.5	5.4
9-13A	5.5	7.0	7.6	7.4
POND LIQUORS:				
9-1A (SCREEN IN ASH)	19.9	19.4	18.8	20
9-1 (SCREEN AT INTERFACE)	19.6	18.9	18.2	18.8
9-1 (6-8 FT)				
9-2 (0-2 FT)				
9-2 (4-6 FT)				
9-14 (ASH OVERFLOW)				
9-30 (LIQUOR SOUTH)				
9-29 (LIQUOR SOUTHEAST)				
9-26 (LIQUOR EAST)				
WATERS UNDER POND:				
9-2	13.5	13.2	12.7	10.4
9-1 (14-16 FT)				
SEAWATER BACKGROUND:				
9-15 (BAYOU EXIT)				
9-36 (OFF 9-24)				
DIKE WELLS/WELLPOINTS:				
9-6A (SOUTH, SHALLOW)	-	9.6	9.9	9.6
9-6 (SOUTH, DEEP)	9.2	10.7	10.2	9.8
9-2A (WEST)	-	12.7	8.7	9.4
9-8A (SOUTH, SHALLOW)	8.6	9.1	9.2	8.9
9-8 (SOUTH, DEEP)		8.9	9.6	8.9
9-10A (NORTH, SHALLOW)			9.8	11.5
9-10 (NORTH, DEEP)	7.9	10.2	9.7	8.5
WELLS/WELLPOINTS-DOWNGRADIENT:				
9-3 (DEEP, SOUTH)	1.7	2.3	1.9	2.4
9-3 (LOW TIDE)				
9-3A (SHALLOW, SOUTH)	3.5	4.1	3.2	3.2
9-3A (LOW TIDE)	4.3	4.5	4.5	4.5
9-7A (SHALLOW, SOUTH)	4.5	4.4	4.2	4.6
9-7 (DEEP, SOUTH)	6	6	6	6.2
9-9 (SOUTH)				
STREAM ON EAST SIDE (SURFACE WATERS):				
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)				
9-23 (MIX OF SEEP 9-19 AND 9-27)				
9-22 (SOUTH OF 9-23)				
SEEPS:				
9-19 (EAST)				
9-17 (SOUTHEAST)				
9-16 (WEST)				

PLANT NINE
CONCENTRATION OF 41 GROUNDWATER LEVEL FT

SAMPLING POINT DESIGNATION	TRIPS 122081	20282	32282	82382
PERIPHERAL WELLS:				
9-11A (SHALLOW,WEST)	7.9	8.2	8.1	8.6
9-11 (DEEP,WEST)	8.4	<6	<7.3	<0.6
9-12A (SOUTHEAST)	1.9	3.9	5	4.2
9-12B (SOUTHEAST)	11.4	11.5	11.7	11.5
9-12 (SOUTHEAST)	3.5	4.9	4.3	4.9
9-13 (NORTH)	1.9	4.1	3.8	4.9
SWAMP SURFACE WATERS:				
9-18 (SOUTH)				
9-20 (SOUTH)				
9-21 (SOUTH)				
9-24 (SOUTH)				
9-34 (OTHER SIDE OF BAYOU)				
9-34 (DISSOLVED SOLIDS)				
9-25 (OTHER SIDE OF BAYOU)				
ASH INFLUENTS				
9-31				
9-31A (CLEAR)				
9-31A (GREY)				
9-31B				
9-31B (BLACK)				
9-31B (DARK)				
9-31C				

(< values are negative)

ELEVATIONS OF TOP OF CASINGS - SMITH

(Data Relative to Mean Sea Level)

ADL Well	TOC Elevation
9-1	24.72
9-1A	25.04
9-2	20.06
9-2A	22.64
9-3	7.32
9-3A	7.44
9-4	11.01
9-5	10.80
9-6	24.37
9-6A	24.05
9-7	7.97
9-7A	5.21
9-8	25.08
9-8A	24.84
9-9	9.65
9-10	25.14
9-11	12.21
9-11A	11.98
9-12	9.45
9-12A	8.83
9-12B	21.31
9-13	11.70
9-13A	12.04

PLANT NINE
CONCENTRATION OF 60 LEAD-GRAPHITE FURNACE PPB

SAMPLING POINT DESIGNATION	TRIPS 120281	20282	32282
BACKGROUND:			
9-4			
9-5			
9-13A			
POND LIQUORS:			
9-1A (SCREEN IN ASH)			
9-1 (SCREEN AT INTERFACE)			
9-1 (6-8 FT)	5		
9-2 (0-2 FT)	6		
9-2 (4-6 FT)	8		
9-14 (ASH OVERFLOW)			
9-30 (LIQUOR SOUTH)			
9-29 (LIQUOR SOUTHEAST)			
9-26 (LIQUOR EAST)			
WATERS UNDER POND:			
9-2			
9-1 (14-16 FT)	3		
SEAWATER BACKGROUND:			
9-15 (BAYOU EXIT)			
9-36 (OFF 9-24)			
DIKE WELLS/WELLPOINTS:			
9-6A (SOUTH, SHALLOW)			
9-6 (SOUTH, DEEP)			
9-2A (WEST)			
9-8A (SOUTH, SHALLOW)			
9-8 (SOUTH, DEEP)			
9-10A(NORTH, SHALLOW)			
9-10 (NORTH, DEEP)			
WELLS/WELLPOINTS-DOWNGRADIENT:			
9-3 (DEEP, SOUTH)			
9-3 (LOW TIDE)			
9-3A (SHALLOW, SOUTH)			
9-3A (LOW TIDE)			
9-7A (SHALLOW, SOUTH)			
9-7 (DEEP, SOUTH)			
9-9 (SOUTH)			
STREAM ON EAST SIDE (SURFACE WATERS):			
9-27 (BACKGROUND SURFACE DRAINAGE IN STREAM)			
9-23 (MIX OF SEEP 9-19 AND 9-27)			
9-22 (SOUTH OF 9-23)			
SEEPS:			
9-19 (EAST)			
9-17 (SOUTHEAST)			
9-16 (WEST)			

PLANT NINE
CONCENTRATION OF 60 LEAD-GRAPHITE FURNACE PPB

SAMPLING POINT DESIGNATION	TRIPS		
	120281	20282	32282
PERIPHERAL WELLS:			
9-11A (SHALLOW,WEST)			
9-11 (DEEP,WEST)			
9-12A (SOUTHEAST)			
9-12B (SOUTHEAST)			
9-12 (SOUTHEAST)			
9-13 (NORTH)			
SWAMP SURFACE WATERS:			
9-18 (SOUTH)			
9-20 (SOUTH)			
9-21 (SOUTH)			
9-24 (SOUTH)			
9-34 (OTHER SIDE OF BAYOU)			
9-25 (OTHER SIDE OF BAYOU)			
ASH INFLUENTS			
9-31			
9-31A			
9-31B			
9-31C			

PLANT NINE

SAMPLING POINT DESIGNATION	Sample Numbers TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	91194
9-2 (0-2 FT)	91196
9-2 (4-6 FT)	91197
SOIL UNDER ASH:	
9-1 (14-16 FT)	91195

PLANT NINE
SOLID CONCENTRATION OF 7 SILVER PPM

SAMPLING POINT DESIGNATION	TRIPS 120281
ASH SOLIDS:	
9-1 (6-8 FT)	<0.5
9-2 (0-2 FT)	<0.5
9-2 (4-6 FT)	<0.5
SOIL UNDER ASH:	
9-1 (14-16 FT)	0.7

PLANT NINE
SOLID CONCENTRATION OF 8 ALUMINUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	102000
9-2 (0-2 FT)	128000
9-2 (4-6 FT)	107000
SOIL UNDER ASH:	
9-1 (14-16 FT)	5580

PLANT NINE
SOLID CONCENTRATION OF 11 BERYLLIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281
ASH SOLIDS:	
9-1 (6-8 FT)	6.84
9-2 (0-2 FT)	7.18
9-2 (4-6 FT)	6.87
SOIL UNDER ASH:	
9-1 (14-16 FT)	0.2

PLANT NINE
SOLID CONCENTRATION OF 12 CALCIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	41000
9-2 (0-2 FT)	50900
9-2 (4-6 FT)	25200
SOIL UNDER ASH:	
9-1 (14-16 FT)	649

PLANT NINE
SOLID CONCENTRATION OF 13 CADMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281
ASH SOLIDS:	
9-1 (6-8 FT)	<1
9-2 (0-2 FT)	<1
9-2 (4-6 FT)	<1
SOIL UNDER ASH:	
9-1 (14-16 FT)	<1

PLANT NINE
SOLID CONCENTRATION OF 14 COBALT PPM

SAMPLING POINT DESIGNATION	TRIPS 120281
ASH SOLIDS:	
9-1 (6-8 FT)	5
9-2 (0-2 FT)	25
9-2 (4-6 FT)	6
SOIL UNDER ASH:	
9-1 (14-16 FT)	7

PLANT NINE
SOLID CONCENTRATION OF 15 CHROMIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	133
9-2 (0-2 FT)	144
9-2 (4-6 FT)	131
SOIL UNDER ASH:	
9-1 (14-16 FT)	23

PLANT NINE
SOLID CONCENTRATION OF 16 COPPER PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	75.5
9-2 (0-2 FT)	67.9
9-2 (4-6 FT)	65.9
SOIL UNDER ASH:	
9-1 (14-16 FT)	3.1

PLANT NINE
SOLID CONCENTRATION OF 17 IRON PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	126000
9-2 (0-2 FT)	32000
9-2 (4-6 FT)	79400
SOIL UNDER ASH:	
9-1 (14-16 FT)	1810

PLANT NINE
SOLID CONCENTRATION OF 18 POTASSIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	12700
9-2 (0-2 FT)	5300
9-2 (4-6 FT)	11300
SOIL UNDER ASH:	
9-1 (14-16 FT)	400

PLANT NINE
SOLID CONCENTRATION OF 19 MAGNESIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	12200
9-2 (0-2 FT)	10500
9-2 (4-6 FT)	15600
SOIL UNDER ASH:	
9-1 (14-16 FT)	211

PLANT NINE
SOLID CONCENTRATION OF 20 MANGANESE PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	444
9-2 (0-2 FT)	342
9-2 (4-6 FT)	409
SOIL UNDER ASH:	
9-1 (14-16 FT)	8

PLANT NINE
SOLID CONCENTRATION OF 21 MOLYBDENUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	50
9-2 (0-2 FT)	80
9-2 (4-6 FT)	50
SOIL UNDER ASH:	
9-1 (14-16 FT)	<30

PLANT NINE
SOLID CONCENTRATION OF 22 SODIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	5100
9-2 (0-2 FT)	7900
9-2 (4-6 FT)	4600
SOIL UNDER ASH:	
9-1 (14-16 FT)	400

PLANT NINE
SOLID CONCENTRATION OF 23 NICKEL PPM

SAMPLING POINT DESIGNATION	TRIPS 120281
ASH SOLIDS:	
9-1 (6-8 FT)	83
9-2 (0-2 FT)	79
9-2 (4-6 FT)	89
SOIL UNDER ASH:	
9-1 (14-16 FT)	<5

PLANT NINE
SOLID CONCENTRATION OF 24 PHOSPHORUS PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	3340
9-2 (0-2 FT)	9220
9-2 (4-6 FT)	2970
SOIL UNDER ASH:	
9-1 (14-16 FT)	<60

PLANT NINE
SOLID CONCENTRATION OF 25 LEAD PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	55
9-2 (0-2 FT)	70
9-2 (4-6 FT)	60
SOIL UNDER ASH:	
9-1 (14-16 FT)	<5

PLANT NINE
SOLID CONCENTRATION OF 27 STRONTIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	834
9-2 (0-2 FT)	1880
9-2 (4-6 FT)	854
SOIL UNDER ASH:	
9-1 (14-16 FT)	7.8

PLANT NINE
SOLID CONCENTRATION OF 28 THORIUM PPM

SAMPLING POINT DESIGNATION	TRIPS 120281
ASH SOLIDS:	
9-1 (6-8 FT)	32
9-2 (0-2 FT)	47
9-2 (4-6 FT)	27
SOIL UNDER ASH:	
9-1 (14-16 FT)	10

PLANT NINE
SOLID CONCENTRATION OF 29 TITANIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	5650
9-2 (0-2 FT)	8250
9-2 (4-6 FT)	6520
SOIL UNDER ASH:	
9-1 (14-16 FT)	564

PLANT NINE
SOLID CONCENTRATION OF 30 VANADIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	437
9-2 (0-2 FT)	204
9-2 (4-6 FT)	240
SOIL UNDER ASH:	
9-1 (14-16 FT)	13.6

PLANT NINE
SOLID CONCENTRATION OF 31 ZINC PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	230
9-2 (0-2 FT)	87
9-2 (4-6 FT)	178
SOIL UNDER ASH:	
9-1 (14-16 FT)	8

PLANT NINE
SOLID CONCENTRATION OF 32 ZIRCONIUM PPM

SAMPLING POINT DESIGNATION	TRIPS
	120281
ASH SOLIDS:	
9-1 (6-8 FT)	238
9-2 (0-2 FT)	356
9-2 (4-6 FT)	250
SOIL UNDER ASH:	
9-1 (14-16 FT)	14

Soil Attenuation Results

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1. Introduction

Experiments were performed to assess the extent of attenuation of particular major and trace elements on soil samples obtained from each of the sites. These experiments were performed with actual leachate and pond liquors obtained from two sites (Allen and Sherco) which differed markedly in their major chemical composition. Particular trace elements were added to the test solutions so that their levels represented the upper range observed in leachates throughout the program. A constant volume of these solutions was then mixed with four different amounts of soil from each of the sites. The slurries were separated, and the residual concentrations in the liquors were measured. The amount absorbed was determined from the difference in concentration between control liquors not exposed to the soil and those which had been exposed. Corrections were made for dilution by the moisture present in the soil. Plots of soil capacity versus solution concentrations were prepared.

2. Experimental Procedures

Initial leachate solutions were prepared as follows: "Allen" liquor was prepared by mixing samples from locations 3-2A and 3-1. To provide a measurement of attenuation for species not present at significant levels in this mix Cd, Cr, Cu, Pb and Se were spiked into the solutions (as Cd^{2+}, $CrO_4^{=}$, Cu^{2+}, Pb^{2+}, Se^{+4}). The solutions were allowed to sit for 24 hours and then they were filtered through a 0.45 μm filter prior to use in the soil experiments. The "Sherco" liquor was prepared by mixing samples from locations 5-14, 5-15 and 5-16. Four elements, Cd, Pb, Zn and As [as As(+5)] were spiked into this solution. The starting concentrations for both solutions are given in Table 1.

Soil samples used were obtained during site development at various locations and depths at each site. A summary of the samples used including chemical and physical characteristics is given in Table 2. The samples were classified into these categories:

TABLE 1

CONCENTRATIONS IN STARTING SOLUTIONS USED
FOR ATTENUATION STUDIES

Element	"Allen" Liquor Concentration (ppm*)	"Sherco" Liquor Concentration (ppm*)
Ag	.0086±.0015	<0.005±0
Al	4.346±0.148	<0.01±0
B	2.322±0.034	113.8±0.69
Ba	0.109±0.005	0.01±0.004
Be	<0.0005±0	<0.0005±0
Ca	79±1.9	500±20
Cd	0.032±0.016[a]	0.162±0.0048[a]
Co	0.098±0.043	0.071±0.045
Cr	0.278±0.0044[a]	0.216±0.0097
Cu	0.0258±0.0054[a]	0.399±0.056
Fe	0.218±0.294	0.24±0.034
K	19±1	12.4±1.1
Mg	3.93±0.17	2051±9
Mn	<0.01±0	17.18±0.3
Mo	0.9±0	1.71±0.13
Na	10±0	270.6±1.9
Nu	0.05±0	0.255±0.021
P	<0.6±0	2.09±0.14
Pb	<0.05±0[a]	0.070±0.04[a]
Si	1.25±0.11	<0.05±0
Sr	3.61±0.166	10.87±0.24
Th	0.08±0.02	<0.01
Ti	0.007±0.0014	<0.005±0
V	0.036±0.0015	0.086±.012
Zn	<0.05[a]	0.11±0.059[a]
Zr	<0.05±0	<0.05±0
As	512±81 (ppb)	515±28[a] (ppb)

TABLE 1 (Continued)

CONCENTRATIONS IN STARTING SOLUTIONS USED
FOR ATTENUATION STUDIES

Element	"Allen" Liquor Concentration (ppm)*	"Sherco" Liquor Concentration (ppm)*
Se	125±9[a] (ppb)	139±9 (ppb)
$SO_4^=$	172±2	8063±511
Cl^-	7.5±1.3	131±11
	pH = 9.31	pH = 8.05

*unless otherwise noted

[a]spiked element

TABLE 2

SOIL SAMPLES USED IN ATTENUATION STUDIES

Site/Location/Sample	%Clay	%Silt	%Sand	%Gravel	TOC[a] (%)	Al%	Ca%	Fe%	K%	Mg%	Mn (ppm)	Na%	Ti (ppm)	Sr (ppm)	Moisture Content%[b]
6-4(F607)	20	20	58	1	0.88	4.57	0.86	1.91	1.96	0.55	742	0.76	2850	116	22.2
9-5(F676,F676D)	← 12 →		88	0	0.72 0.64	0.56 0.50	0.02 0.02	0.29 0.26	0.03 0.03	0.02 0.02	11 13	0.01 0.01	649 593	3.1 3.1	18.9 -
1-14(F173)	17	45	34	4	0.64	6.69	0.15	4.28	1.75	0.45	742	0.32	4590	90	16.0
3-2(F40)	28	8	69	0	0.08	2.87	0.18	2.15	0.51	0.11	4940	0.10	4460	45.9	12.7
3-3(F48)	7	31	61	1	<0.02	10.4	0.05	5.12	1.46	1.1	900	0.02	4030	14.7	22.3
3-6(F55)	19	24	53	4	<0.02	9.5	2.27	2.81	1.62	0.74	494	2.09	2830	497	16.9
5-8(F412)	← 11 →		69	20	0.16	4.43	1.63	1.01	1.38	0.37	460	1.65	931	249	5.0
5-3(F392)	21	17	59	3	0.16	5.18	1.31	2.35	1.59	0.59	572	1.22	2440	203	7.3
7-5(F4062)	← 6 →		82	12	0.04	4.68	0.56	0.94	3.02	0.13	1330	1.40	688	134	5.4

[a] Total Organic Carbon
Clay (<0.005mm)
Silt (0.005-0.075mm)
Sand (0.075-4.8mm)
Gravel (4.8-78mm)

[b] Moisture content determined by weight loss upon freeze drying of solid.

Sample	Category
6-4	brown clayey sand
9-5	very fine sand with little silt
1-14	silty fine sand with little clay
3-2	alluvial material
3-3	residual soil (silty sand)
3-6	alluvial material
5-3	clay core liner
5-8	gravelly well graded silty sand
7-5	fine sand

Samples of soils were used without any prior preparation. Fifty-mL aliquots of starting solution were mixed with 0.05, 0.5, 5 and 25 gms (dry basis) moist soil to produce four different solid-to-liquid ratios. The slurries were mixed for 24 hours at room temperature using a rotary shaker. The samples were then separated by filtration through a 0.45 μm filter. The pH of each solution was measured and aliquots were taken for ICAP and As and Se analyses. They were preserved by acidifying with HNO_3. In some cases aliquots were taken and cooled for anion measurements using ion chromatography. Blanks were carried through the complete procedure to monitor losses from solution onto the container walls in the absence of soil. Samples of starting solution were also analyzed prior to and after the experiment to check on loss during storage.

ICAP analyses were performed both on solutions and soil solids by Barringer Magenta Ltd. Moisture content was determined as weight loss after freeze drying of the solids. Solids were digested using $HF/HNO_3/HClO_4$ prior to ICAP analysis. Arsenic and selenium measurements were performed on solutions using hydride evolution AA with prior digestion of the liquid using $HNO_3/HClO_4$. Anion measurements were performed using ion chromatography. All of the above procedures are described in greater detail elsewhere in this report.

Calculations of quantities absorbed on the soil were made based upon the difference in the amounts of each substance present in the starting liquors and the equilibrated solutions. The quantity in the equilibrated solution was calculated from measured concentrations by taking the original volume of solution (50 mL) added to the liquid contributed by the volume from the soil based upon the measured soil moisture content. Weights of soil used in the

TABLE 3

SUMMARY OF pH VALUES FOR LEACHATE/SOIL MIXTURES[a]

Quantity of Soil[b]	Soil Samples								
"Allen" Liquor (pH 9.3)	3-2	3-3	3-6	1-14	5-3	5-8	6-4	9-5[c]	7-5
0.05 gms	8.97	-	9.26	9.11	9.27	9.33	9.25	8.93,8.73	-
0.5	8.58	8.02	9.09	8.35	9.14	9.25	9.05	5.01,5.37	9.25
5	6.99	4.88	7.42	6.91	8.15	8.79	7.95	2.6,2.56	9.06
25	6.50	4.85	6.54	5.83	7.69	8.23	7.75	2.1,2.19	8.42
"Sherco" Liquor (pH8.05)									
0.05 gms	7.97	7.96	7.96	7.96	7.94	7.93	8.20	8.13,8.03	8.10
0.5	7.79	7.77	7.93	7.74	7.93	8.00	8.02	6.93,6.81	8.07
5	5.76	5.79	7.50	6.84	7.80	8.18	7.89	3.12,2.98	8.18
25	6.09	4.29	6.59	5.52	7.55	7.76	7.21	2.34,2.34	7.98

[a] All solutions had an initial volume of leachate of 50 mL. Additional liquid <5mL was added in cases where significant contribution from soil moisture occurred.

[b] Dry basis, soil were added moist.

[c] Duplicates performed.

TABLE 4

SUMMARY OF ATTENUATION EXPERIMENTS RESULTS

Element	Leachate Solution Composition	Sample(Location)	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity ÷ Solution Concentration
Arsenic	Allen	676(9-5),676D	2-240 ppb	1.0-335	a	450-1396
		48(3-3)	0.3-75	0.3-47	b	1000-627
		55(3-6)	4.7-492	1.1-66.9	2	234-136
		173(1-14)	0.7-275	1.1-252	2	1571-916
		392(5-3)	4.8-454	1.1-119	2	229-262
		412(5-8)	14-454	1.1-121	2	79-267
		607(6-4)	6.5-495	1.1-80	1	169-161
		4062(7-5)	10-485	1.1-7.9	1	110-161
		40(3-2)	<0.2-360	>1.1-215	1	>5500-597
	Sherco	676,676D,(9-5)	5-338	1-215	a	200-635
		173(1-14)	0.4-483	1-44	1	2500-91
		392(5-3)	7.8-473	1-59	1	128-125
		412(5-8)	18-477	1-53	2	56-111
		48(3-3)	<0.2-225	1.1-28.9	1	>5500-128
		40(3-2)	<0.2-413	1.0-108	1	>2000-261
		55(3-6)	2.4-420	1.1-11	1	458-261
		607(6-4)	2.2-495	1.0-32.5	2	454-66
		4062(7-5)	17.9-514	1.1-7.5	1	61-15

Plot 1 = linear 3 or 4 points (log/log)
Plot 2 = non linear but increasing (log/log)
[a]pH dependent lower capacity at lower pH

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample(Location)	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity ÷ Solution Concentration
Selenium	Allen	607(6-4)	5.9-117	0.?-1.0	2	34-8.5
		4062(7-5)	26-124	0.1-0.2	b	3.8-1.6
		676(9-5),676D	2-12	0.2-12.3	a	100-1025
		48(3-3)	<0.1-63	0.25-5.8	3	2500-92
		55(3-6)	2.8-106	0.24-1.73	1	86-16.3
		40(3-2)	0.2-113	0.25-12	1	1250-106
		173(1-14)	0.35-95	0.25-3	1	714-32
		392(5-3)	8-120	0.2-0.8	2	25-6.7
		412(5-8)	30-97	0.3-2.4	3	10-24.7
	Sherco	48(3-3)	0.7-96	0.27-124	a	386-1291
		40(3-2)	3-12.8	0.27-126	b	90-9844
		392(5-3)	14-137	0.25-7.4	3	18-54
		412(5-8)	37-149	0.23-0.8	2	6.2-5.4
		55(3-6)	4.4-138	0.27-0.70	2	61-5.1
		173(1-14)	2.5-131	0.27-7.7	1	108-58
		607(6-4)	8.5-106	0.26-3.3	1	31-31
		4062(7-5)	59-123	0.16-0.15	3	2.7-1.3
		676(9-5)	4-28	0.26-11.1	a	65-393

Plot 1 linear 3 or more points
Plot 2 curve 3 or more points
Plot 3 two points only
[a]pH effect observed, inverse linear log/log plot
[b]random plot

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample(Location)	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity : Solution Concentration
Boron	Sherco	607(6-4)	94.6 mg/L	17.2±5	3	0.18
	Allen	48(3-3)	1.92mg/L	0.4±0.14	3	0.25
		40(3-2)	1.93	0.52±0.13	3	0.25
		55(3-6)	1.91	0.43±0.11	3	0.25
		173(1-14)	2.00	0.32±0.13	3	0.25
		4062(7-5)	2.10	0.32±0.13	3	0.25
Calcium	Sherco	48(3-3)	368 mg/L	182±23	3	0.5
		676(9-5)	419	82±23	3	0.2
		676D(9-5)	429	60±23	3	0.14
	Allen	48(3-3)	12.4-43.8mg/L	130-322	3	7-10
		40(3-2)	42.3-73.0	68-590	2	1.6-8.1
		55(3-6)	52.5	44±5	3	0.8
		173(1-14)	51.3-69.9	47-898	2	0.9-12.8
		412(5-8)	66.8-72.2	61-65	3	0.9-0.9
		607(6-4)	59.7-72.7	26-616	2	0.4-8.5
		4062(7-5)	62.0-72.7	31-63	3	0.5-0.9
Cadmium	Sherco	40(3-2)	40-120	0.24-42.0	2	6-350
		55(3-5)	70-150	0.17-12.0	4	2.4-80
		173(1-14)	60-150	0.19-12.0	2	3-80
		392(5-3)	40-110	0.24-5.16	2	6-47
		412(5-8)	50-130	0.22-3.20	2	4.4-24.6
		607(6-4)	30-150	0.26-12.0	2	9-80
		676(9-5)	130-140	3-22	v	23-157

v pH effect-release or very small capacity at low pH values data given are for high pH
Plot 4 = log/log plot nearly vertical.

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample(Location)	Solution Conc (ppb)	Soil Capacity ug/gm	Plot Type	Soil Capacity : Solution Concentration
Cadmium	Sherco	4062(7-5)	50-150	0.22-1.20	2	4.4-8
	Allen[b]	676	a	a	a	
		676D	a	a	a	
Chromium	Sherco	40(3-2)	190	0.03	c	<0.35
		55(3-6)	170	0.06	c	<0.35
		173(1-14)	170	0.06	c	<0.35
		393(5-3)	180	0.06	c	<0.35
		607(6-4)	170	0.05	c	<0.35
		676(9-5)	d	d	d	
	Allen	48(3-3)	40-130 ng/L	0.47-1.45	3	11.8-11.8
		40(3-2)	40-180	0.47-0.96	3	11.8-5.3
		55(3-6)	30-250	0.49-0.24	3	16.3-1.0
		173(1-4)	70-220	0.40-0.54	3	5.7-2.4
		676(9-5)	210	6.80±2.5	3,d	32
		4062(7-5)	250	0.04±0.04	3	<0.2
		676D(9-5)	210	0.8±2.5	3,d	32
Copper	Sherco	48(3-3)	159 ng/L	0.44-290	4	8.3-1,800
		40(3-2)	19-72	0.76-328	1	40-4,500
		55(3-6)	45-179	0.69-220	2	15-1,200
		173(1-4)	14-100	0.77-300	1	55-3,000
		392(5-3)	32-154	0.73-246	2	23-1,600
		412(5-8)	35-251	0.73-148	2	21-590
		607(6-4)	15-99	0.76-300	2	51-3,030
		676(9-5)	47-91	35-308	3	745-3,385
		4062(7-5)	30-272	0.74-127	1	25-467
		6760(9-5)	52-105	34.6-294	3	665-2,800
	Allen	48(3-3)	12 ng/L	0.14, e	e	12
		40(3-2)	<8-12	>0.03-0.14	3	11-12

b. Loss of Cd in starting solution upon storage was observed. Data not interpretable except for release from 676 and 676D

c. Finish solution conc relatively constant, value reported for 25 gm soil mixture

d. Release at low pH

e. release at high S/L ratio

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample (Location)[i]	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity ÷ Solution Concentration
Copper	Allen	55 (3-6)	13 ng/L	1.28	3	106
		173 (1-14)	10-11	1.58-0.15,e	3,e	158-13
		412 (5-8)	12-13	0.14-1.28	3,e	11-98
		607 (6-4)	12-13	0.14-1.28	3	11-98
		676 (9-5)		e	e	-
		676D (9-5)	8	<1.78	3,e	<220
Iron	Sherco	f	f	f	f,g	h
	Allen	f	f	f	f,g	h
Potassium	Sherco	48 (3-3)	15mg/L	h	h	h
		40 (3-2)	14	h	h	h
		55 (3-6)	18	h	h	h
		392 (5-3)	6-9	12.4-4.33	3	2-3.7
		676 (9-5)	9	5.0	3	0.6
		676D (9-5)	9	5.0	3	0.6
		607 (6-4)	h	h	h	-
	Allen	f	6-16	<	f	-
Magnesium	Sherco	48 (3-3)	1740 mg/L	232	3	0.1-0.5
		55 (3-6)	1740	330	3	0.1-0.5
		173 (1-14)	1740	344	3	0.1-0.5
		392 (5-3)	1680	614	3	0.1-0.5
		607 (6-4)	1480-1920	810-1003	3	0.1-0.5
	Allen	Release from soils observed for all sample soils				
Manganese	Sherco	40 (3-2)	0.12-15.3 mg/L	34.1-1,880	2	280-122
		55 (3-6)	15.1	18.0	3,f	1.2

f. Concentration in finish solutions not statistically different from starting solution.

g. Except for F676 and F676D where released from solid was observed.

h. release from soil observed

i. If no sample data reported, data was statistically not significant (see text)

j. at high soil/liquid ratio

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample(Location)	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity : Solution Concentration
Manganese	Sherco	392(5-3)	2.62-11.2	28.9-59.0	3	11-5.3
		412(5-8)	2.52-11.9	29.2-52.0	3	11.6-4.4
		607(6-4)	<0.01-13.8	>172-336	2	>17,200-24
		4062(7-5)	7.48-14.5	19.0-26.0	3	2.5-1.8
		48(3-3)	-	h	h	
		676(9-5)	-	h	h	
	Allen	k	k	k	k	
Molybdenum	Sherco	48(3-3)	1.1 mg/L	5.9	3	5.4
		40(3-2)	0.3-0.5	2.78-12.0	3	9-24
		55(3-6)	1.1	1.0	3	0.9
		173(1-14)	1.3	>2.8-3.9	-	<2-3
		392(5-3)	1.4	0.5	3	0.4
		676,676D(9-5)	<0.3	>2.8->14	-	9-47
		4062(7-5)	µ	µ	µ	<0.1
		412(5-8)	µ	µ	µ	<0.1
	Allen	40(3-2)	>0.3 mg/L	>1.1->6	-	>3.7-20
		55(3-6)	0.4-0.8	0.9-0.88	3	2-1
		173(1-14)	<0.3-0.8	>1.15-9.80	-	>4-12
		392(5-3)	0.8	0.14	3	0.2
		412(5-8)	0.8	0.16	6	0.2
		4062(7-5)	0.8	0.16	3	0.2
		676,676D(9-5)	<0.3-0.4	>1.1-50.0	-	>3-125
		48(3-3)	<0.3	>1.1->5.9	-	>3-20
		607(6-4)	-	1	1	-
Sodium	Sherco	48(3-3)	224 mg/L	43.0	3	0.19
		607(6-4)	233-251	23.0-156	3	0.1-0.6
	Allen	1	1	1	1	

k. Starting solution had Mn below detection level release of Mn was observed for 4 out of 9 soils (F48, F55, F173, F676 (F676D))

1. data shows release for most soil samples

µ Starting and final solutions not statistically different

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample(Location)	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity : Solution Concentration
Nickel	Sherco	48 (3-3)	210 ng/L	4.50 ±1.3ϕ	3	-
		55 (3-6)	220	0.31	3	1.4
		173 (1-14)	210	4.50ϕ	3	-
		392 (5-3)	180-210	0.14-0.43	3	0.8-2.1
		412 (5-8)	200-210	0.10-0.45	3	0.5-2.1
		4062 (7-5)	180	0.14±0.02	3	0.8
	Allen	m	m	m	m	
Phosphorus	Sherco	p	p	p	p	
	Allen	q	q	q	q	
Strontium	Sherco	48 (3-3)	4.26-8.54 mg/L	12.3-21.6	3	2.9-2.5
		40 (3-2)	5.90-9.10	9.20-16.7	3	1.6-1.8
		392 (5-3)	7.44	6.3±0.7	3	0.8
		412 (5-8)	8.4	4.5	3	0.5
		607 (6-4)	6-67-8.94	6.92-17.9	3	1.0-2.0
	Allen	48 (3-3)	0.453-1.75 mg/L	6.22-18.2	3	13.8-10.4
		40 (3-2)	0.900-3.05	5.32-55.0	2	5.9-18.0

m Release of Ni observed for sample 676 and 676D;
n Sample 173 at high solid to liquid ration released Ni
ϕ Data not corraborated by other samples (e.g., 5 gm and 25 gm mixes) where no adsorption occurred.
p Small constant amount removed by all levels of soil in all solutions
q All solutions below detection limit

TABLE 4 (Continued)

Element	Leachate Solution Composition	Sample (Location)	Solution Conc (ppb)	Soil Capacity µg/gm	Plot Type	Soil Capacity ÷ Solution Concentration
Strontium	Allen	55 (3-6)	0.706-3.04	5.68-57.0	2	8-19
		173 (1-14)	0.428-2.85	6.28-75.0	2	14.7-26.3
		392 (5-3)	1.14-2.75	4.84-85.0	2	4.2-30.9
		412 (5-8)	0.852-2.15	5.48-14.5	3	6.4-6.7
		607 (6-4)	0.392-2.49	6.36-111	2	16.3-44.6
		4062 (7-5)	1.09-2.52	0.05-10.9	3	0.05-4.3
Vanadium	Sherco	48 (3-3)	z	z	z	<1
		40 (3-2)	p	p	p	
		55 (3-6)	z	z	z	
		173 (1-14)	44-69 ng/L	0.08-1.68	2	1.8-24
		392 (5-3)	47-73	0.07-1.26	2	1.5-17
		412 (5-8)	64-76	0.04-1.00	2	0.6-13
		607 (6-4)	48-75	0.07-1.3	2	1.5-17
		676,676D (9-5)	r	r	r	-
		4062 (7-5)	58-79	0.05-0.7	4	0.9-9
	Allen	48 (3-3)	8-14 ng/L	0.05-2.20	2	6-157
		40 (3-2)	9-30	0.05-6.00	4	5.5-200
		55 (3-6)	21-31	0.03-0.05	5	1.4-1.6
		173 (1-14)	15-17	0.04-0.19	1	2.7-11
		392 (5-3)	18-26	0.03-1.00	1	1.6-38
		412 (5-8)	16-20	0.04-0.16	3	2.5-8
		607 (6-4)	19-27	0.01-0.90	2	1.5-33
		676,676D (9-5)	r	r	r	-
		4062 (7-5)	14-25	0.04-0.11	3	2.9-4.4
Zinc	Sherco	t	t	t	t	
	Allen	s	s	s	s	

t= data not statistically different between samples and starting solution. Release was observed for 676 and 676D at high S/L ratio

r= Sample 676 and 676D showed release of V at higher soil to liquid ratios

s= initial solution contained Zn below detection limit. All samples were BDL except for 676 and 676D where release of Zn was observed for higher S/L ratios.

in the calculation were on a dry basis. An initial check was then made to determine if the difference between added amount and amount present in the equilibrated solution was significant in light of experimental errors in the individual measurements. Overall error was calculated using observed and standard deviations of analytical measurements, estimated weighing errors of ±10 mg at 50 mg soil and ±50 mg at .50, 5 and 25 gms soil and a ±1 mL error in the volume. A t- test (90% confidence level) was then made to determine if the difference in amounts present in the starting vs equilibrated solutions was significantly different from zero. Plots and tables of log (µg/g) absorbed versus log (conc in solution, µg/mL) were prepared where 3 or more points were available.

3. Results

The pH values observed for various solid to leachate ratios for both "Allen" and "Sherco" liquors are given in Table 3. All of the soils produce a more acidic solution than the original liquors at high soil to liquor ratios, but to very different degrees. Soil from site 9 is very acidic (pH 2.3 at 25 grams soil solids) while site 7 soil has the smallest affect on pH.

The soils can be ranked according to the pH of the final slurry in the following order (first most acidic) (most acid) 9-5>>3-3>1-14 3-6≈3-2>5-3≈5-8≈7-5 (least acid).

It should be noted that the pH of each mixture varied depending upon the soil/liquor ratio, and thus the capacity calculated from each batch experiment is related to both concentration as well as the particular pH of that mixture. Thus, it is possible that non-linearity in the plots of log $(\frac{\mu g}{g})$ vs log (conc in solution) may be due partially to the effect of the different pH.

Table 4 provides a summary of the ranges for the amount absorbed on the soil over the observed solution concentration ranges (at equilibrium with that soil) for the various soil samples and the two liquors. In addition, the type of plot obtained over that range is indicated (1 denotes a linear log/log plot, 2, a non-linear but steadily increasing curve, and higher numbers and alphabetical notes indciate that less than 3 valid points were available. These tables also provide a ratio factor (R) which is calculated by dividing soil capacity (µg/g) by the respective solution concentration (µg/mL) at equilibrium with that soil. This factor (a range of values) is used to rank the soils.with regard to relative capacity for absorption.

Illustrative plots for data which shows linear behavior (on a log/log scale) and other behavior are provided in Figure 1, 2 for As, Se

A summary of the ranking of the soils for relative adsorption of particular elements is summarized in Table 5.

Table 6 provides a summary of literature data on capacities for various elements and variety of solid materials.

Table 7 provides a ranking for chemical and physical properties for the soil samples used in this study.

4. Discussion

A review of the ranking of the soils from the various sites with regard to capacity at particular species concentrations (Table 5) suggests that when an element is attenuated, soils 3-2, 3-3, 9-5 and 1-14 tend to have the highest capacities, whereas soil 7-5 typically has one of the lowest capacities. A review of the physical and chemical properties rankings of these soils (Table 7) suggests that different soil properties are probably responsible for adsorption onto these soils. The low relative capacity soil (7-5) has a relatively low total organic carbon content (TOC) ranking as well as relatively low Fe, Mn, clay and silt contents. Its calculated surface area is relatively low. Its sand content is highest. Thus, if one considers, adsorption mechanisms involving organic complexation, adsorption on iron and maganese hydrous oxides, and simply ionic interaction with the surfaces of small particles, it is reasonable that the soil should appear least likely to have a low capacity relative to other soils.

Soil 3-2 tends to have a relatively high absorption capacity and a review of its properties suggest that its large surface area (silty clay) and high maganese content may be responsible for its properties (note that it has a relatively low TOC). Soil 9-5, which has one of the highest concentration of TOC was also observed to have a relatively larger capacity at higher pH values (low soil to liquid ratios). Soil 9-5 has relatively low values for Mn, Fe, Clay, silt and calculated surface areas, but a high TOC content. This TOC content is presumably responsible for its high capacity at low soil/liquor ratios where pH values are relatively neutral. At larger soil to liquid ratio its capacity is low due to the low pH of the slurry. Compared to 9-5, 1-14 soil is higher in non-TOC components, but capacity is not generally higher, thus TOC may be dominating. Soil 3-3 ranks high in Fe and Mn content as well as silt content but low in TOC.

TABLE 5

RANKING OF SOILS CAPACITIES BY RATIOS OF SOIL CAPACITY
DIVIDED BY SOLUTION CONCENTRATION
[over pH ranges observed]

Element	Leachate Liquor	Ranking
As	Allen	[3-2]>[9-5∿3-3∿1-14]>[3-6∿6-4∿5-8∿5-3]>>[7-5]
	Sherco	[3-3∿3-2∿1-14]>[9-5∿3-6∿6-4]>[5-8∿5-3]>[7-5]
Se	Allen	[3-3∿9-5∿3-2]>[1-14]>[3-6]>[6-4∿5-3∿5-8]>[7-5]
	Sherco	[3-2∿3-3]>[9-5]>[1-14]>[5-3∿3-6∿6-4]>[5-8]>[7-5]
B	Allen	All ratios similar and small (<1)
	Sherco	All ratios similar and small (<1)
Ca	Allen	[3-3∿3-2∿1-14]>[6-4]>[7-5∿5-8∿3-6]
	Sherco	Ratios small (<1)
Cd	Allen	Release observed at 9-5 at low pH
	Sherco	[3-2∿9-5]>[3-6∿1-14∿5-3∿5-8∿6-4]>[7.5] Release at 9-5 at low pH.
Cr	Allen	[9-5]>[3-2∿3-3∿3-6]>[1-14]>[7-5] Release for 9-5 at low pH
	Sherco	All ratios very small (<1) Release for 9-5 at low pH
Cu	Allen	[9-5∿3-6∿1-14∿5-8∿6-4]>[3-2∿3-3] Release observed for many soils at high soil to leachate ratio
	Sherco	[3-2∿1-14∿6-4∿9-5]>[5-3∿3-6∿3-3]>[7-5∿5-8]
Fe	Allen	Release observed for 9-5 at low pH
	Sherco	Release observed for 9-5 at low pH
K	Allen	All ratios very small (<1)
	Sherco	All ratios very small (<1)
Mg	Allen	Release observed for 9-5 at low pH
	Sherco	Release observed for 9-5 at low pH

TABLE 5 (continued)

Element	Leachate Liquor	Ranking
Mn	Allen	Release observed for four out of nine soils [3-3, 3-6, 1-14, 9-5]
	Sherco	[6-4∿3-2]>[5-3∿5-8]>[3-6∿7-5] Release observed for two soils [3-3, 9-5]
Mo	Allen	[3-2∿1-14∿9-5]>[7-5∿5-8∿5-3∿3-6]
	Sherco	[3-2∿9-5]>[1-14]>[7-5∿5-8∿5-3∿3-6]
Na	Allen	Release observed for most soils
	Sherco	Very small ratio (<1) and release in several soils
Ni	Allen	Low ratios (0.5-2)
	Sherco	Release observed for two soils at low pH [9-5, 1-14]
Sr	Allen	[1-14∿5-3∿6-4]>[3-3∿3-2∿3-6]>[5-8]>[7-5]
	Sherco	Low ratio for most soils (1-3)
V	Allen	[3-3∿3-2]>[6-4∿5-3]>[1-14∿7-5∿3-6∿5-8]
	Sherco	Most soils had similar capacity (1-20 range)
Zn	Allen	Release observed for 9-5 at low pH
	Sherco	Release observed for 9-5 at low pH

TABLE 6

ABSORPTION OF VARIOUS ELEMENTS ON SOLID MATERIALS

Ref.	Soil Type*	Test Method	$C_{Equilibrium}/[C_{Initial}]$	Absorption Capacity µg/g
	ARSENIC			
1	silt loam	column	0.4	>15 to >40
1	loam	column	0.4	>10 to >30
2	Plant Allen (Alluvium)	batch	1.3	>6.5
2	Plant Allen (Residual)	batch	1.3	>6.5
3	A $Fe(OH)_3$	Langmuir Adsorption	0.05 - 0.5	31300 to 38500 per gm $Fe(OH)_3$ Ave: 35,000
4	Allen soils if all Fe content was available to sorb As (1.5% to 4.5% Fe as $Fe(OH)_3$)	calculation	-	<525 to <1580
5	Wagram-(0.6% Fe oxides) l.s. Kalkasa-(1.8 ") s Fanno - (3.7 ") c Anthony-(1.8 ") s.l	column	72	~12
5	Ara (40.% Fe oxides) sicl	column	72	~60
5	Mohave(1.7% ") s.l. Nicholson(5.6% ") sic Molokai(23% ") c Davidson(17% ") c	column	72	~120
6	Allen soil if all Ba parent precipitated $Ba(AsO_4)_2$	calculation	-	<37 to <98

*l.s. loamy sand
s sand
c clay
s.l. sandy loam
r c l silty clay loam

TABLE 6 (Continued)

ABSORPTION OF VARIOUS ELEMENTS ON SOLID MATERIALS

Ref.	Soil Type	Test Method	$C_{Equilibrium}/[C_{Initial}]$	Absorption Capacity µg/g
	CADMIUM			
;	Clay Loams	Batch	1 ppm	7-32
8	Humic Acids	Batch	6-22 ppm	28,100-55,600
9	Silt Loams	Batch	1.1-13 ppm	6,180-2,300
10	Sandy Loam	Batch	1 ppm	10.0
			10 ppm	90.3
			100 ppm	320
			200 ppm	46.7
	Sandy Clay		1 ppm	>9.7
			10 ppm	99.3
			100 ppm	635
			200 ppm	753.4
	Clay		1 ppm	>9.7
			10 ppm	97.4
			100 ppm	523
			200 ppm	593.4
	Clay		1 ppm	10.0
			10 ppm	98.1
			100 ppm	543.8
			200 ppm	560.0
	COPPER			
11	Clays	Batch	0-10 ppm	4,700-15,900
7	Clay Loams	Batch	1 ppm	159-386
8	Humic Acids	Batch	0.3-12 ppm	33,700-51,400
9	Silt Loams	Batch	0.5-71 ppm	730-1,780
10	Sandy Loam	Batch	1 ppm	9.8
			10 ppm	97.9
			100 ppm	547.0
			200 ppm	493.4
	Sandy Clay		1 ppm	9.5
			10 ppm	99.5
			100 ppm	996.7
			200 ppm	1,780.0

TABLE 6 (Continued)

ABSORPTION OF VARIOUS ELEMENTS ON SOLID MATERIALS

Ref.	Soil Type	Test Method	$C_{Equilibrium}/C_{Initial}$	Absorption Capacity µg/g
	Clay		1 ppm	>9.5
			10 ppm	>99.5
			100 ppm	991.0
			200 ppm	1,403.4
	Clay		1 ppm	10.0
			10 ppm	>99.3
			100 ppm	822.7
			200 ppm	1,236.7
	LEAD			
8	Humic Acids	Batch	1-41 ppm	143,000-207,000
10	Sandy Loam	Batch	1 ppm	10.0
			10 ppm	99.2
			100 ppm	980.7
			200 ppm	898.4
	Sandy Clay		1 ppm	9.5
			10 ppm	99.4
			100 ppm	999.5
			200 ppm	1,839.6
	Clay		1 ppm	9.4
			10 ppm	99.4
			100 ppm	997.6
			200 ppm	1,697.2
	Clay		1 ppm	10.0
			10 ppm	>99.5
			100 ppm	993.9
			200 ppm	1,481.7
	NICKEL			
10	Sandy Loam	Batch	1 ppm	10.0
			10 ppm	83.5
			100 ppm	25.0

TABLE 6 (Continued)

ABSORPTION OF VARIOUS ELEMENTS ON SOLID MATERIALS

Ref.	Soil Type	Test Method	$C_{Equilibrium}/[C_{Initial}]$	Absorption Capacity µg/g
	Sandy Clay		1 ppm	>9.5
			10 ppm	98.6
			100 ppm	574.0
			200 ppm	253.4
	Clay		1 ppm	9.5
			10 ppm	94.7
			100 ppm	415.0
			200 ppm	120.0
	Clay		1 ppm	10.0
			10 ppm	96.3
			100 ppm	493.0
			200 ppm	200.0
	CALCIUM			
8	Humic Acids	Batch	0.2-8 ppm	20,900
	MAGNESIUM			
8	Humic Acids	Batch	0.1-5 ppm	8,510
	SELENIUM			
12	Goethite (iron oxide)	Batch (pH 7)	43 ppm	7,100
			8 ppm	6,700
12	Goethite	Batch (pH 10.5)	43 ppm	1,970
			5 ppm	63
	ZINC			
11	Clays	Batch	0-10 ppm	3,600-14,000
8	Humic Acids	Batch	0.3-13 ppm	20,300-39,200
10	Sandy Loam	Batch	1 ppm	9.9
			10 ppm	80.4
			100 ppm	55.1

TABLE 6 (Continued)

ABSORPTION OF VARIOUS ELEMENTS ON SOLID MATERIALS

Ref.	Soil Type	Test Method	$C_{Equilibrium}/[C_{Initial}]$	Absorption Capacity µg/g
	Sandy Clay		1 ppm	9.8
			10 ppm	99.8
			100 ppm	620.3
			200 ppm	566.7
	Clay		1 ppm	9.5
			10 ppm	95.1
			100 ppm	440.4
			200 ppm	100.4
	Clay		1 ppm	9.0
			10 ppm	97.2
			100 ppm	488.5
			200 ppm	513.9
7	Humic Acids		1 ppm	31-138

REFERENCES *

1. Santhanam, C.J. et.al., Waste and Water Management for Conventional Coal Combustion Assessment Report - 1979. Vol. III. U.S. EPA-600/7-80-0122; Holland, W.F., et.al., "Environmental Effects of Trace Elements in Rand Disposal of Ash and FGD Wastes", Radian Corp. for EPRI, September, 1975.

2. Preliminary ADL experiments, Mixture of 5 gm soil with 25 mL of ash pond interstitial liquor from well in the ash, mixed for 2 hours As as present in liquor.

3. Pierce, M.L. and C.B. Moore, "Adsorption of Arsenic on Amorphous Iron Hydroxide from Dilute Aqueous Solution," Environ. Sci. & Technology, 1462, 1980, 214-216.

4. ADL calculations. Allen soil partial digests data indicate 1 to 3% Fe content or 1.5 to 4.5 Fe if expressed as $Fe(OH)_3$ to relate to source 3 data. This assumes all the Fe will dissolve and form a hydroxide which will then adsorb As as per reference 3.

(*) References 5-12 on page 575.

TABLE 7

RANKING OF SOILS WITH REGARD TO PHYSICAL AND CHEMICAL PROPERTIES

Property	Ranking
Total Organic Carbon	[1-14∿9-5∿6-4]>[5-3∿5-8]>[7-5∿3-2∿3-3∿3-6]
Al concentration	[3-6∿3-3]>[1-14]>[5-8∿5-3∿3-2∿7-5∿6-4]>[9-5]
Ca	[3-6]>[5-8]>[5-3]>[6-4]>[7-5]>[1-14∿3-2] [9-5∿3-3]
Fe	[3-3∿1-14]>[5-8∿6-4∿3-6∿3-2]>[7-5]>[9-5]
Mg	[3-3]>[5-8∿5-3∿1-14∿3-6∿6-4]>[7-5∿3-2]>[9-5]
Mn	[3-2]>[3-3]>[3-6∿6-4∿1-14∿5-8∿5-3]>[7-5]>[9-5]
Na	[5-3∿5-8∿7-5∿3-6]>[6-4]>[1-14∿3-2]>[9-5∿3-3]
Clay	[3-2]>[5-3∿6-4]>[3-6∿1-14]>{9-5∿5-8∿7-5}
Silt	[1-14]>[3-3]>[3-6∿6-4∿5-3]>[9-5∿5-8∿7-5]
Sand	[9-5∿7-5]>[5-8∿3-2∿3-3]>[6-4∿3-6∿5-3∿1-14]
Calculated Surface Area*	[3-2]>[5-3∿3-6∿1-14∿6-4]>[7-5∿5-8∿3-3∿9-5]

*Based on assigning values for clay, silt and sand and summing according to soil composition.

Other soils of intermediate relative capacity tend to fall intermediate in properties. It is evidenced from these data that a mixture of properties of these soils may be responsible for and can explain their relative absorptive capacities.

The relative importance of particular properties, however, is uncertain. However, it is evident that the following properties could effect their capacity:

- TOC
- Clay Content
- Mn Content
- Silt Content
- Total Surface Area
- Fe Content
- pH of soil/leachate mixture

The effect of pH of the soil/slurry mixture is most evident for soil 9-5 (at high soil/liquor ratios) where release of trace components from the soil into the liquor was observed (e.g. Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Zn,).

Some elements did not exhibit significant attenuation (ratios <1-2) at the levels studied (B, Ca ("Sherco"), K, Mg, Na, Sr (Sherco)).

The extent of adsorption and the effect of particular properties above obviously depend on the particular species in question as well as the other solution variables affecting attenuation.

The above discussion is generally more relevant to the following species studied in these experiments:

As, Se, Ca ("allen"), Cd ("Sherco"), Cr ("Allen), Mo, V, and possibly Sr ("Allen").

It is interesting to note that many of the above elements would be likely to exist in these solutions as anions (e.g., various protonated forms of AsO_4^{3-}, SeO_3^{2-}, CrO_4^{2-}, MoO_4^{3-}, VO_3^{2-})

An element which does not illustrate this trend is Cu with soil 3-2 and 3-3 being of relative lowest capacity with "Allen" liquor and 3-3 of midrange capacity "Sherco" liquor. It is interesting to note that 3-2 and 3-3 are lowest in total organic carbon content of the soils suggesting that Cu attenuation is more related to organic content than other properties for the "Allen" liquor.

A comparison of the relative rankings for the same soil, but for different leachate liquor composition ("Allen" vs "Sherco") in Table 5 suggests the following grouping for change in relative rankings:

Elements that change markedly in relative ranking: Ca, Cd,Cr, Cu, Mu, Sr, V

Elements that do not change in relative ranking: As, Se, Mo.

It should be recalled that the pH of the slurry (soil/liquor mix) was different for many "Allen" vs "Sherco" slurries. The "Allen" slurries for low soil to liquor ratios (.05 and .5 gm soil) was more basic than the corresponding "Sherco" slurries by 0.5-1 pH units. The higher soil/liquid ratios (5 and 25 gms) differed in a similar fashion but by a lesser amount (see Table 3). This in itself may alter attenuation irrespective of other differences in "Allen" versus "Sherco" chemical composition.

Since the starting concentrations of arsenic and selenium were similar in both the "Allen" and "Sherco" solutions (approximately 510 ppb As and approximately 130 ppm Se), their removal from solution from each of the two solutions by varying amounts of the different soils provides an opportunity to compare both the effects of soil type and solution composition. Figures 1A and 1B show log-log plots of the arsenic loadings on the soils in equilibrium with various concentrations of dissolved arsenic in solution. Upon examining Figures 1A and 1B, it is quite obvious that in virually every case, a particular soil removes more arsenic from the "Allen" solution than from the "Sherco" solution (at constant equilibrium soluble arsenic concentration). From a practical standpoint, most of the capacity differences are not of a great deal of significance. One of the greater differences, that observed for soil 3-3 would translate to a capacity ratio of 2.5 at a concentration of 50 ppb in solution.

The other observation which is of interest is the tendency for the two isotherms for each soil to parallel each other regardless of whether they are linear, concave, convex, or strangely shaped as in the case of those for soil 9-5. The implications of the shape of the 9-5 isotherms are discussed below in the section on attenuation behavior of acidic soils.

Similar isotherms for selenium are shown in Figures 2A and 2B. The selenium data appear to be more scattered and the relationships between Allen and Sherco liquor are not quite as clear. However, in many cases more selenium was removed from Allen liquor than from Sherco. The unusual phenomenon of an isotherm with a portion having a negative slope is again seen for selenium with soil 9-5 reflecting the effects of varying pH.

Attentuation Behavior of Acidic Soils Samples

The unusual shape of the adsorption isotherm for selenium in "Sherco" liquor when contacted with soil 9-5 has interesting implications for the migration of selenium through a soil of that type. The unusual isotherm is not an experimental anomaly because similar behavior was observed in duplicate parallel experiment; arsenic was found to exhibit similar behavior with that soil; and limited data for certain other elements seem to suggest isotherms having protions with negative slopes. As was pointed out previously, the unusual shape of the isotherm in Figure 1 is due to the compounded effects of varying the liquor/soil ratio and of the variation in the final pH of the mixtures at different ratios. The data point at the lowest soil loading was obtained at the lowest liquor/soil ratio. In that case, the acidity of the soil was substantially greater than the alkalinity of the liquor resulting in a final pH of about 2.3. At higher liquor/soil ratios the final pH was preogressively higher, and even though loadings increase systematically, equilibrium soluble selenium concentration was observed to decrease, until the soil apparently began to approach saturation at the highest loading.

Even though data of this sort are casued by changes in two parameters, they do relfect the migration behavior which would occur in disposal sites when the liquor percolated through this type of soil. At the outset of percolation, the soil acidity would dominate, leading to acidic solution pH values which would lead to relatively large amounts of soluble selenium passing through minimally attenuated. As liquor continued to pass through a particular volume element of soil, the soil acidity would gradually be neutralized and the soluble selenium concentration would decrease due to greater attenuation. Eventually, when the soil became saturated with regard to Se attenuation, the soluble selenium level in that volume element would again rise to produce the breakthrough normally

observed in column experiments. A prediction of the distance that the initially high selenium concentrations under acidic conditions would travel through a vertical column of soil would require additional data on the shape of the adsorption isotherm at low pH and lower equilibrium concentrations of soluble selenium. The relative acidity of the soil compared to the alkalinity of the liquor will also effect the extent of migration of the initially high concentration. Nevertheless, it is quite conceiveable that substantially high levels of selenium is a leachate of low alkalinity could pass through an acidic soil before the soil acidity was neutralized and greater attentuation occurred.

REFERENCES

5. Fuller, W. Movement of Selected Metals, Asbestos, and Cyanide in Soils, U.S. EPA, EPA 600/2-77-020, 1977.

6. ADL calculations. Ba for Allen soils is in the range of 100-300 ppm calculation assumes all the Ba was dissolved and then precipitated with As.

7. Sidle, R.C., and L.T. Kardos, "Adsorption of Copper, Zinc, and Cadmium by a Forest Soil," J. Environ. Qual. 6(3), 1977, 313-317.

8. Beveridge, A. and W.F. Pickering, "Influence of Humate-Solute Interactions on Aqueous Heavy Metal Ion Levels," Water, Air, and Soil Pollution 14, 1980, 1971-185.

9. Cavallaro, N., and M.B. McBridge, "Copper and Cadmium Adsorption Characteristics of Selected Acid and Calcareous Soils," Soil Sci. Soc. Am. J., Vol. 42, 1978, 550-556.

10. Covar, A.P., Parameters Effecting the Fate of Metals in Various Soils, M.S. Thesis, Dept. of Civil Engineering, Texas A&M University, 19.

11. Slavek, J., and W.F. Pickering, "A Study of the Sorptive Properties of Surface Sediments in a Landfill Project Region," Water Research 15, 1981, 867-874.

12. Hingston, F.J., A.M. Posner, and J.P. Quirk, "Adsorption of Selenite by Goethite" In Adsorption From Aqueous Solution, Advances in Chemistry Series No. 79, American Chemical Society, Wash. D.C., 1968, 82-90.

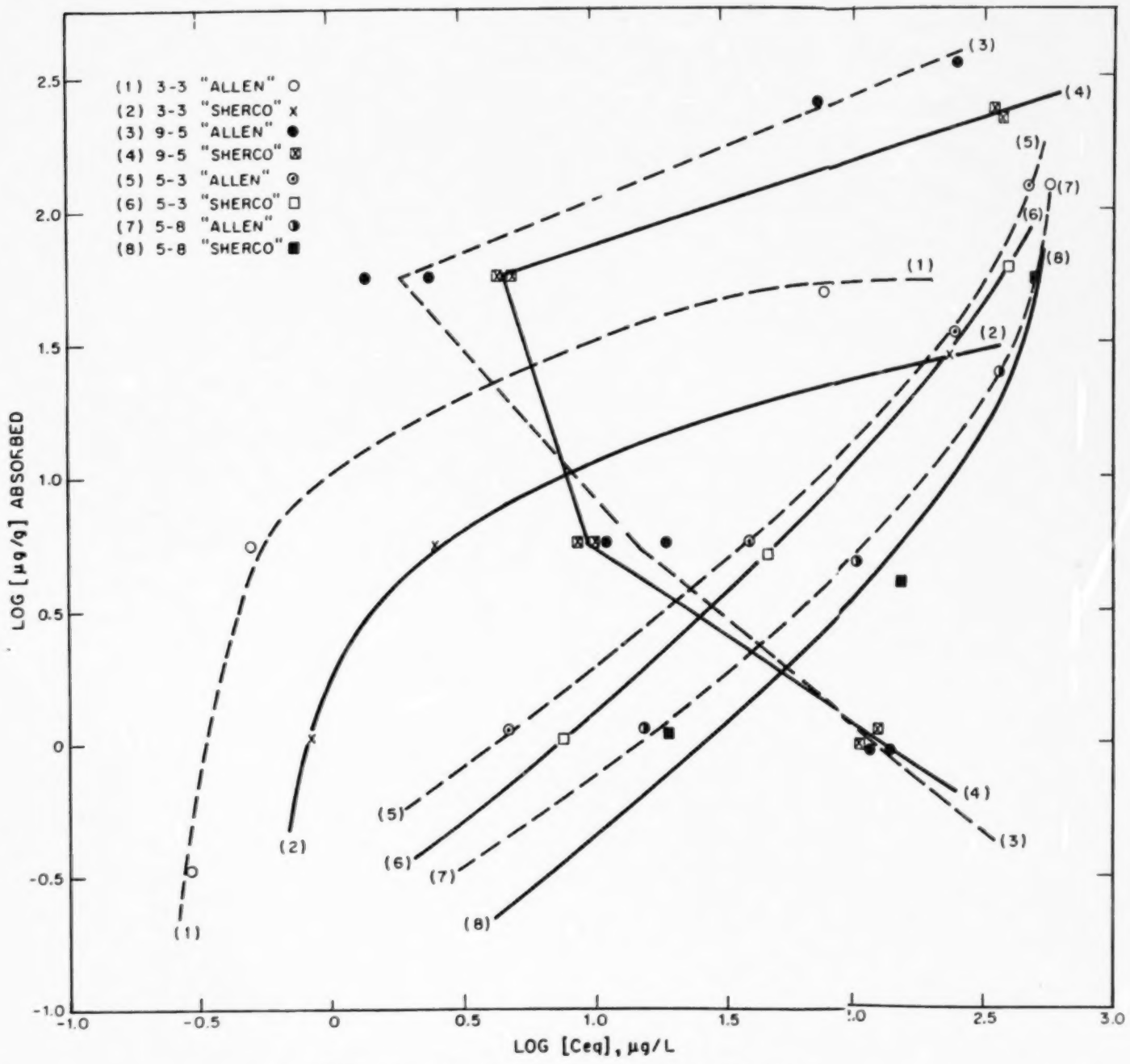

FIGURE 1A: CAPACITY VS CONCENTRATION FOR ARSENIC

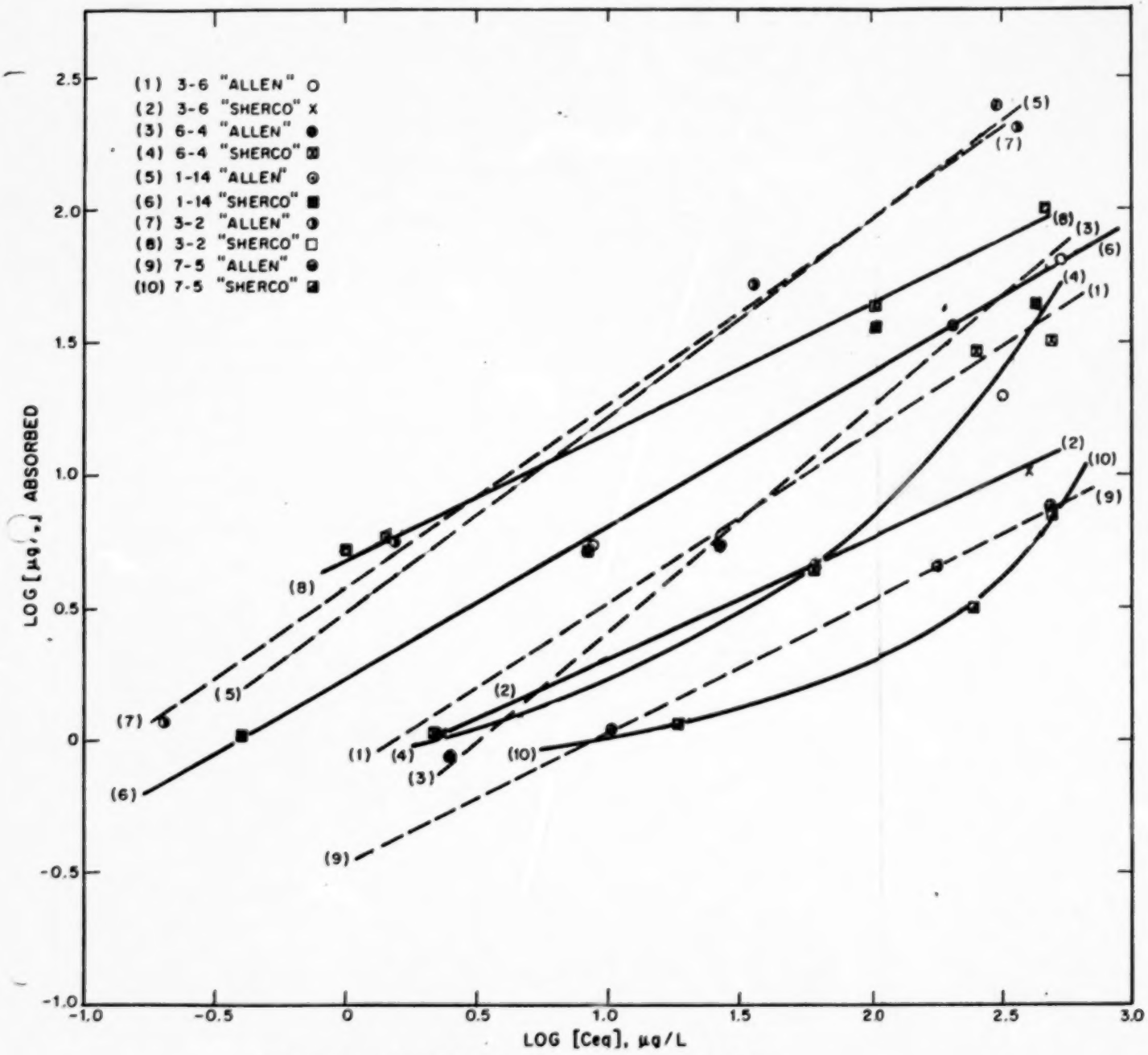

FIGURE 1B: CAPACITY VS CONCENTRATION FOR ARSENIC

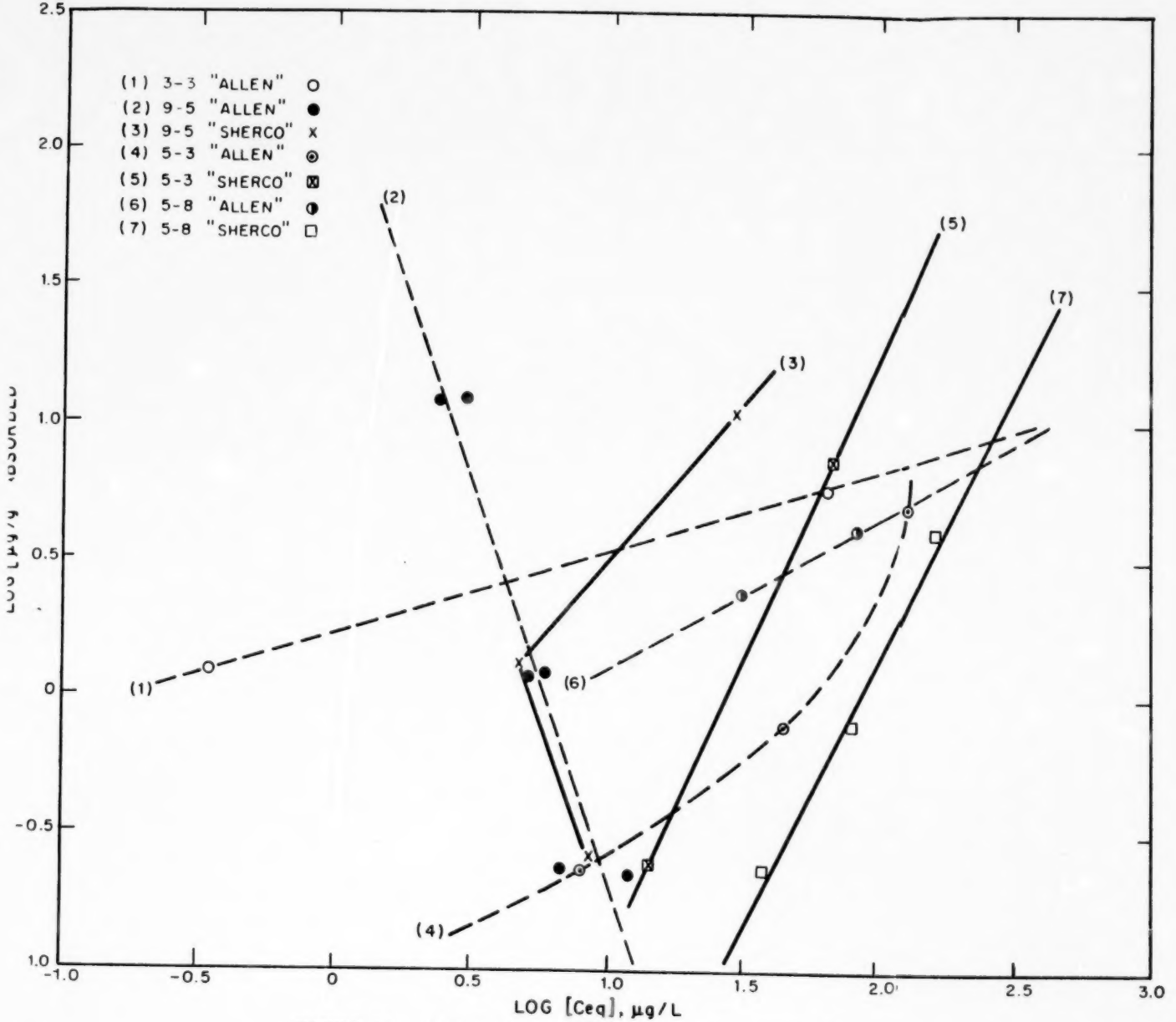

FIGURE 2A: CAPACITY VS CONCENTRATION FOR SELENIUM

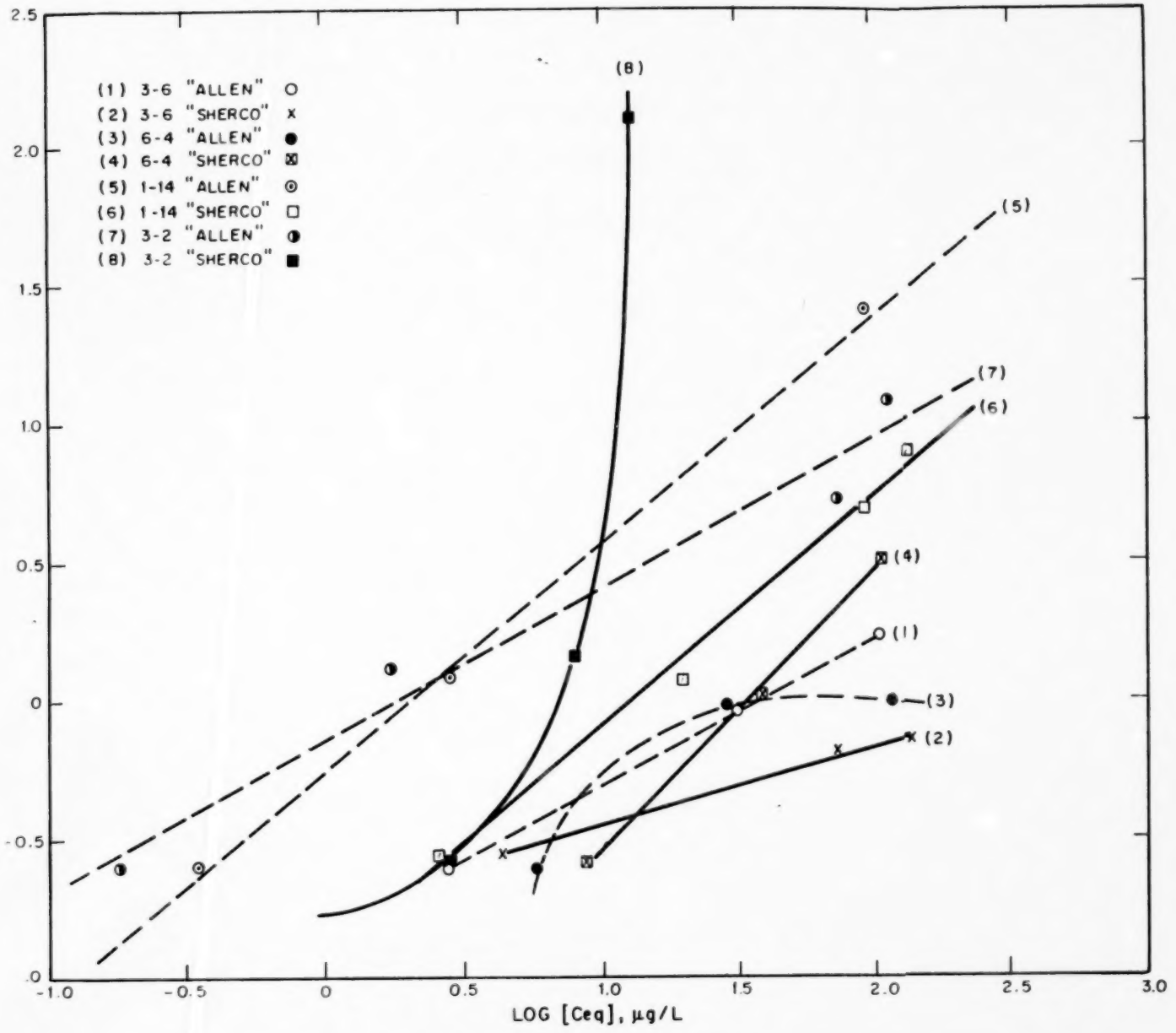

FIGURE 2B: CAPACITY VS CONCENTRATION FOR SELENIUM